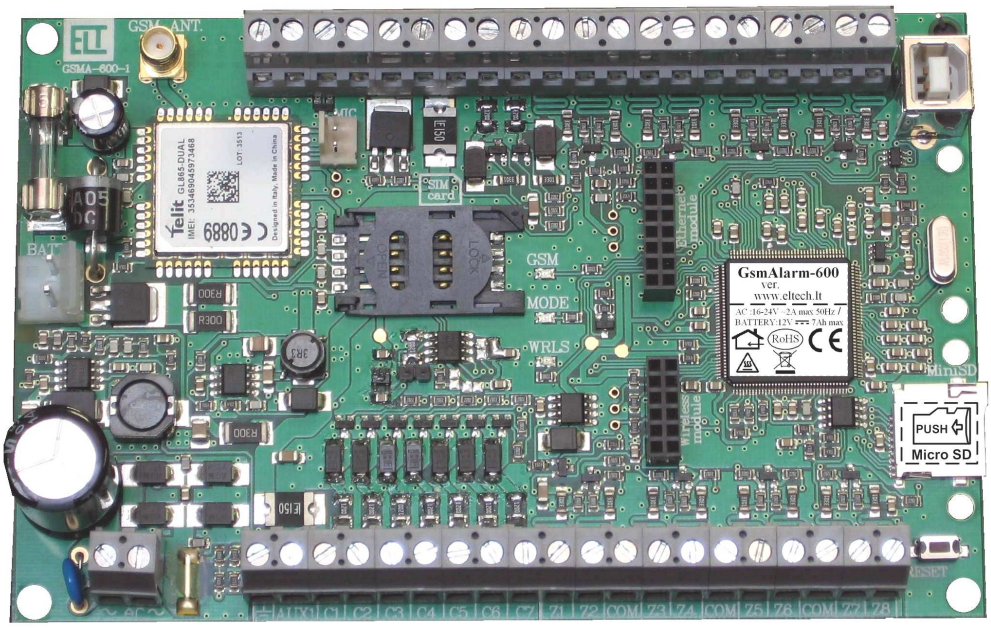
GsmAlarm-600 (V1.02)



FEATURES

- **The user is called upon triggering of the alarm and is informed by a voice message which sensor has tripped and how many times.**
- **16 inputs. Up to 32 protection zones.**
- **7 programmable low current outputs and one siren output.**
- **5 users are notified.**
- **20 programmable keypad access codes or iButton keys.**
- **Automated remote control using up to 250 number Caller ID recognition without call cost.**
- **Possibility to send information to alarm monitoring station using the Contact ID protocol through GSM voice call.**
- **Remote control using a mobile phone keypad (through DTMF tones) and SMS.**
- **GSM JAMMING detection).**
- **24 hour timer.**
- **Two partial arming modes (STAY and SLEEP).**
- **Possibility to divide the system into two independent partitions.**
- **Option to connect an external microphone.**
- **Possibility to connect up to 16 temperature sensors for temperature measurement.**
- **Ability to enter zone/partition names and their temperatures by means of K32LCD keypad.**
- **Possibility to connect up to 4 keypads.**
- **Info-carrying SMS showing state of each sensor, power supply voltage, GSM signal strength.**
- **Remote diagnostic, programming and firmware upgrade over GPRS.**
- **Diagnostic, programming and firmware upgrade via USB connection.**
- **Integrated quad-band GSM module.**
- **Wide operating temperature range: -35 … +65ºC.**
- **Cheap maintenance**

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1. GENERAL INFORMATION

1.1. SAFETY INSTRUCTIONS

Please read and follow these safety guidelines in order to maintain safety of operators and people around. Retain all safety and operating instructions for future reference during the whole operating lifetime of device

	Device has two power supplies: **main and reserve**. **Main:** power transformer: I: 230V ~ 120 mA max 50/60 Hz; II: (16–24)V ~2 A max 50/60 Hz; **Reserve:** 12 V 7Ah battery. **DC power supply which must be approved by LST EN 60950-1 standard and be easily accessible**
	Any additional devices linked to the system GsmAlarm-600 (computer, sensors, relays etc.) must be approved by LST EN 60950-1 standard.
	External power supply can be connected to AC mains only inside installation room with automatic 2-pole circuit breaker capable of disconnecting circuit in the event of short circuit or over-current. **Open circuit breaker must have a gap between connections of more than 3mm and the disconnection current 5A**
	System GsmAlarm-600 is a device mounted in limited access areas. Any system repairs must be done only by qualified, safety aware personnel. There are no parts you can change at place in the device.
	The system must be used only with approved back-up battery to avoid fire or explosion hazards. Special care must be taken connecting positive and negative battery terminals. Switching the pole terminals places is NOT allowed.
	Mains power must be disconnected before any installation or tuning work starts. The system installation or maintenance must not be done during stormy conditions.
	F1 type fuse - Slow blown 5A. The blown fuse should not be replaced with a fuse of a different type than instructed by the manufacturer.

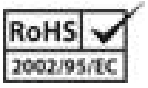
	ATTENTION ! **EXPLOSION HAZARD IF AN UNSUITABLE BATTERY IS USED THAT IS NOT APPROVED BY THE MANUFACTURER.** **DO NOT INSTALL THE BATTERY WITH REVERSED POLARITY.** **DO NOT SHORT-CIRCUIT BATTERY POLES.** **After the battery expires, it should be removed according to the effective regulations (EU Directives 91/157/EEC and 93/86/EEC).**

	CAUTION TO THE MAINTENACE PERSONNEL ! **TWO POLES OF AC MAINS.** **THE FUSE OF THE POWER TRANSFORMER IS ON THE NEUTRAL CONDUCTOR !**

	If you use I security class computer for setting the parameters it must be connected to earth.

Remote control and monitoring device GsmAlarm-600 has built-in radio transmitter operating on GSM900 and GSM1800 networks. Do not use the device where it can cause interferences and danger. Do not arrange the device close to medical equipment and appliances. Do not use the device in explosive environment. Device is not resistant to moisture, chemical materials or mechanical damage. Don't attempt to personally repair the system. System label is on the top side of the device.

This symbol on the product or on its packaging means that your electrical and electronic equipment should be disposed at the end of life separately from your household wastes. There are separate collection systems for recycling in EU. For more information, please contact the local authority or the dealer where you purchased the product.



The device compliance to RoHS Directive.

1.2. PACKAGE CONTENT

Main board GsmAlarm-600 .....Qnty 1
GSM antenna with magnetic fix and 2 m lead cable .....Qnty 1
Microphone.....Qnty 1
Microphone connector .....Qnty 1
Load resistors 1,0 kΩ ±5% .....Qnty 32
Load resistors 2,2 kΩ ±5% .....Qnty 16
Battery connection wire .....Qnty 1
Fastening clips .....Qnty 4
User's manual .....Qnty 1

1.3. SHORT DESCRIPTION OF OPERATION

GsmAlarm-600 can be used for protection of houses, apartments, cottages and other buildings. In the case of trespass of the protected zone GsmAlarm-600, depending on the programmed system operating algorithm, can switch the siren on, call the user and inform by a voice message which sensor was tripped, how many times, and the present temperature. Device can send SMS messages to five users and transfer information to the alarm monitoring station by Contact ID protocol through GSM voice call.

User answers the call, can listen, what is going on in the unit and control the system using his mobile phone keypad (through DTMF tones).

GsmAlarm-600 has 7 (8, if siren is not used) programmable outputs, intended for remote control of different devices. User can turn on/off heating, ventilation or lighting systems etc, by using his mobile phone just by typing a 2-digit code or sending SMS to the control device.

Device works perfect for remote control of automated gates, fences and electromagnetic door locks**.** In order to open the gate, user calls GsmAlarm-600 number. Then GsmAlarm-600 checks the caller's number in the list of programmed user numbers and in the case of positive find, switches on the gate control device and cancels the call automatically. 250 users are able to control the gate. User numbers can be grouped into eight groups, where each group controls a single output out of eight outputs.

Up to 4 Paradox K636, K10V/H (MG10LEDV/H), K32 (MG32LED), K32LCD (MG32LCD), TM50 keypads can be connected to GsmAlarm-600. By using the keypad users can arm or disarm the system and configure system parameters. Following keypad LED indicators you can determine protected unit state, system mode etc.

The system is controlled by iButton (also known as DALLAS) keys**.** Several control functions can be assigned to each key. Example: a user can arm the system and a controllable output by touching the contact with the key. A user name can be assigned to each key (as well as to a keypad code) that will be indicated in SMS messages. Up to 20 iButton keys can be programmed.

If keypad or iButton keys are not used, the system may be armed and disarmed by a simple switch or a short free call. The alarm system is controlled exclusively from the user telephone. If the system receives a call, coming not from the user's phone, the call is immediately interrupted and the user is sent an SMS message, specifying the caller's phone number. The user is also informed by an SMS message about loss and restoration of AC mains power supply.

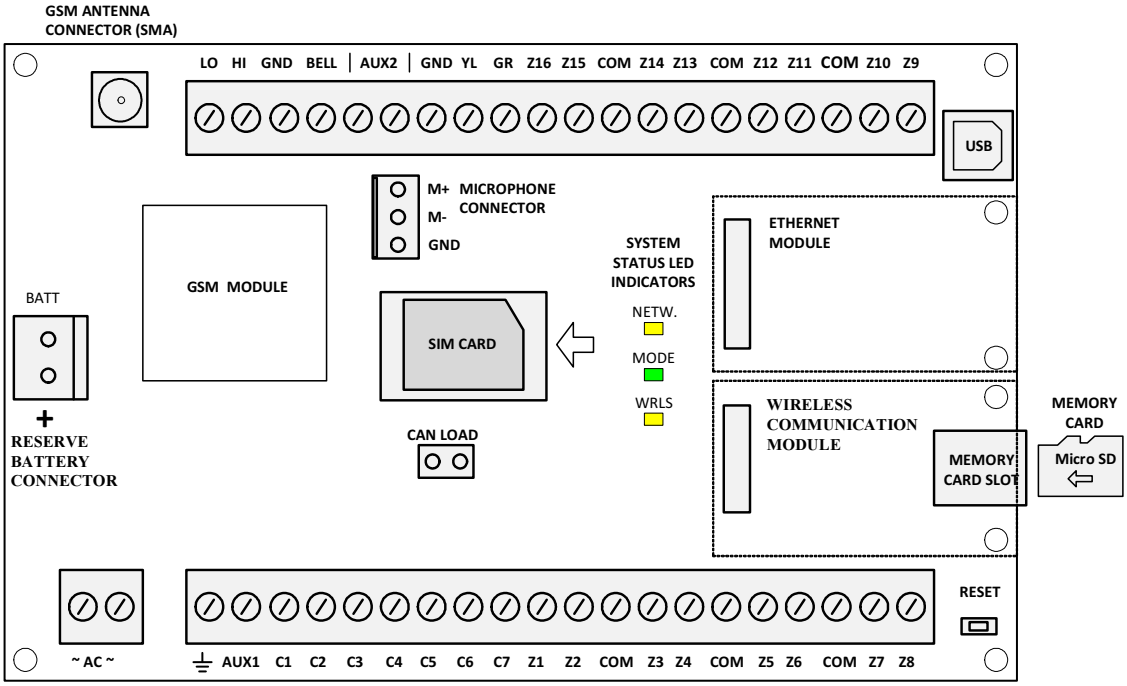
The system has temperature measurement possibility. Up to 16 temperature sensors can be connected to GsmAlarm-600 device. If temperature exceeds or subsides programmed range, system sends SMS to user(s), relevant programmable output can be activated/ deactivated.

24 hour timer enables activation/deactivation of programmable output, arming or disarming, receiving SMS messages with protected object state information on a desired time.

The system has capability to detect intentional jamming of GSM. The siren is activated upon detection of the jamming signal, and the user is informed thereof by an SMS message about it after clearing of GSM jamming signal. The message indicates the jamming onset time.

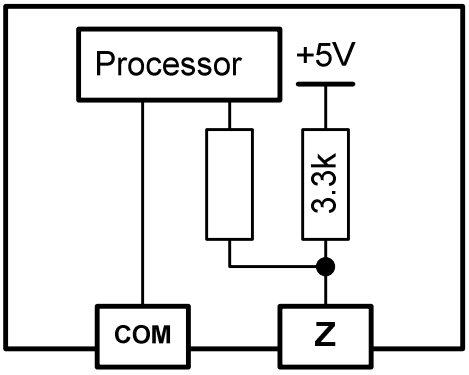
GsmAlarm-600 parameters may be set via a computer using the GSM alarm configuration tool GAPROG. The module is accessible via an USB port or over the internet through GPRS channel. If a computer is unavailable, the system is set up by a keypad or SMS messages.

2. CONNECTOR AND LED FUNCTIONALITY



GsmAlarm-600 Connection terminals and LED indicators

2.1. ZONE INPUT TERMINALS *Z1 - Z16*



Equivalent diagram of zone input

Inputs Z1-Z16 are used to connect alarm detectors or temperature sensors KTY81-110 (PHILIPS).

The inputs can operate in EOL or ATZ mode (see. Ch. 5.3.1.1), in this case 1 kΩ and 2,2 kΩ load resistors are required.

2.2. KEYPAD CONNECTION TERMINALS *GR* and *YL*

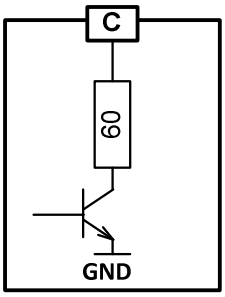
Use GR, YL, GND and AUX terminals to connect PARADOX *K636, K10V/H (MG10LEDV/H), K32 (MG32LED)* or K32LCD (MG32LCD) keypad. These terminals can also be used for connection of the iButton key reader or ON/OFF switch.

2.3. AUXILIARY POWER TERMINAL *AUX1* and *AUX2*

The auxiliary power supply can be used to power motion detectors and other devices. Both terminals AUX1 and AUX2 are short-circuit-protected. Max load current: 800 mA max. Total load current from both outputs should not exceed 1.6 A max.

Important! In order to avoid overloading power supply outputs AUX1 and AUX2 take into consideration the total current consumption by all devices (relays, switches, keypads, etc.) connected to the corresponding output.

2.4. Outputs *C1 - C7*

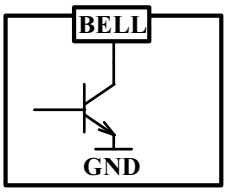


Programmable (PGM) outputs C1- C7 are used for remote control or connection of timer-controlled devices. Relays with 12V operating voltage and current not exceeding 70 mA max, are recommended for device control.

Output operating modes are described in Ch 5.3.2.1.

Equivalent diagram of C1-C7 outputs

2.5. BELL/SIREN CONNECTION TERMINALS BELL



These terminals are relay contacts of the programmable output are used to connect audio siren or extra-commutated device.

Commutated current may reach: 0.6 A max.

Equivalent diagram of BELL output

2.6. AC POWER TERMINALS

Use a 16-24 VAC transformer with a minimum 40 VA rating to supply AC power to the GsmAlarm-600.

2.7. *BATT* CONNECTOR

Use this connector to connect the backup battery. Max capacity of the backup battery is 7 Ah. Voltage: 12 VDC.

2.8. EXTERNAL MICROPHONE CONNECTOR *M+ M-*

This connector is used to connect an external microphone. Connect white wire to contact **M+**, black – to **M-**. If wire of the microphone is long (over 2 m), it is recommended to use shielded twisted pair cable. Connect shield to GND contact. In order to avoid interference install microphone as far as possible from GSM antenna. The microphone is activated automatically when voice messaging function is not in use (a MicroSD card is absent). When voice messaging function is activated, the microphone is activated by DTMF command **19*** (see Ch. 15).

2.9. CONTACTS *LO* and *HI*

The contacts are dedicated for connection of auxiliary devices via CAN (Controller Area Network) interface.
LO: CANL signal, HI: CANH signal. CAN interface is not used in this version.

2.10. JUMPER *CAN LOAD*

When the jumper is installed, the CAN line is loaded with a 120 Ω resistor. The load should be plugged in as line terminators only for two devices connected via CAN interface. CAN interface is not used in this version.

2.11. RESET BUTTON

RESET button is used to restore factory default settings (see. Ch. 6).

2.12. MEMORY CARD

Micro SD memory card. The card is required for voice messaging function (see Ch. 8). SD card is not included with GsmAlarm-600.

2.13. WIRELESS COMMUNICATION AND ETHERNET MODULES

Wireless communication module is designed for reception of signals from wireless sensors. Ethernet module is designed for connection of the device to the Ethernet. The modules are no included with GsmAlarm-600 and are acquired separately. The user can independently connect the required module to the corresponding connector. The modules are to be used in the upcoming versions of the device.

3. LED INDICATORS

3.1. *NETWORK:* GSM MODULE STATE AND SIGNAL STRENGTH INDICATOR

Indicator state	Explanation
Out.	GSM module is not in use. No power supply or system failure.
Continuously On.	There is no GSM operator network registration. Possible causes: SIM card PIN code request is not deactivated, antenna not connected or poor network connection quality.
Blinking more frequently than once a second.	GSM module is in use: outgoing call or SMS is being sent
Blinks 5 times, short break after.	Very good signal.
Blinks 4 times, short break after.	Good signal.
Blinks 3 times, short break after.	Satisfactory connection..
Blinks 2 times, short break after.	Weak connection.
Blinks once, short break after.	Poor connection.

3.2. *MODE:* ALARM SYSTEM STATUS INDICATOR

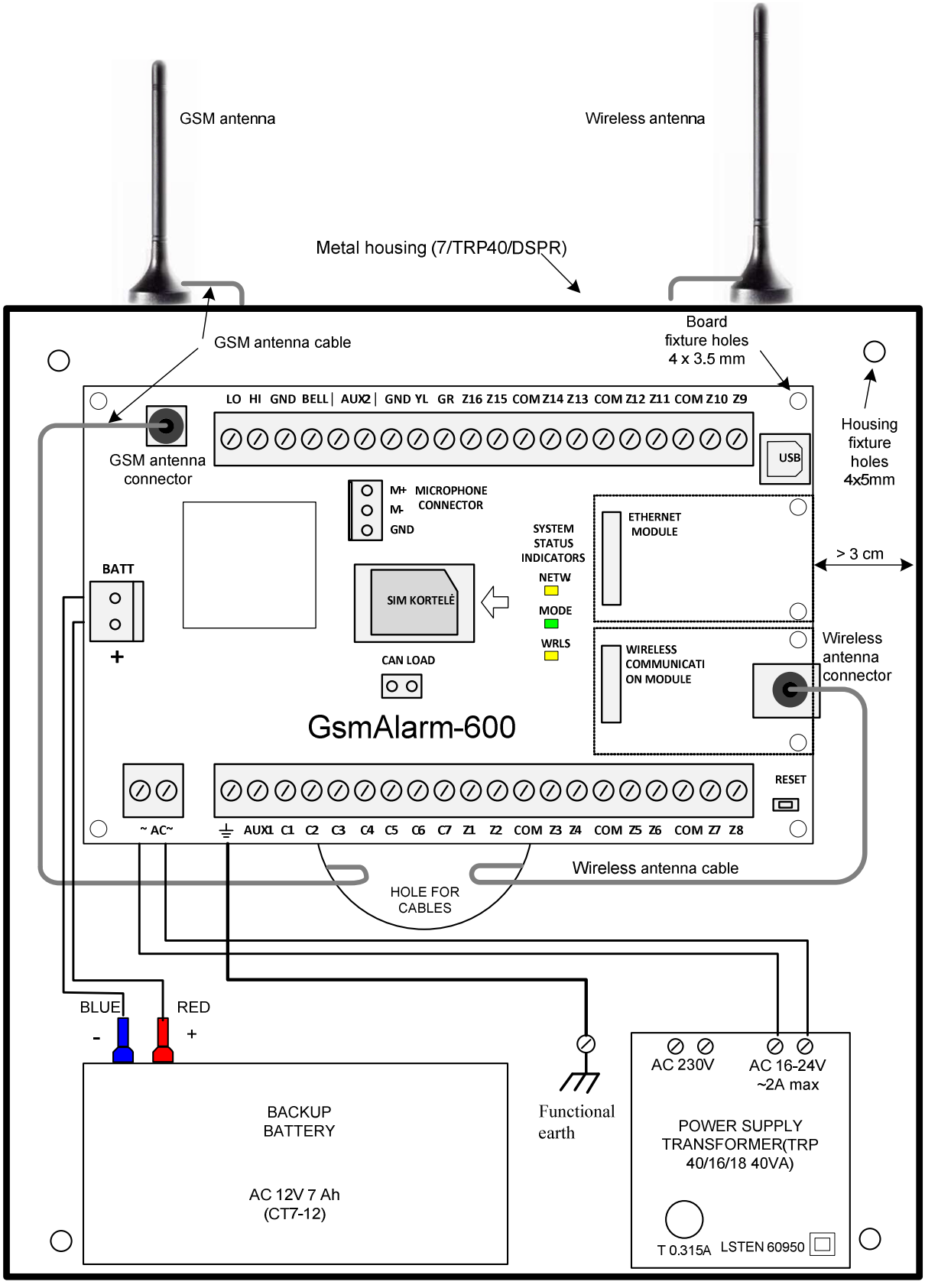
Indicator state	Explanation
Out.	No power supply or system failure.
Continuously On.	System is operative, disarmed, no zone sensors have been triggered.
On with short breaks.	System is operative, disarmed, but one or more zone sensors have been triggered.
Blinking with low frequency (once in 2-3 sec.).	System is armed.
Blinking more frequently than once a second.	System is in alarm state
Blinking very rapidly for 2-3 sec.	SMS instruction or DTMF command receipt confirmation.

3.3. *WRLS:* WIRELESS INDICATOR

Indicator state	Explanation
Blinks periodically.	Data are received from wireless sensors.

4. INSTALLATION

4.1. GENERAL INSTALLATION INSTRUCTIONS



System should be assembled in metal housing 7/TRP40 as recommended

According to manufacturer recommendations, hire qualified security system specialist (or company) to perform system installation works. Self-dependent installation of the system can be performed only if person possess basic knowledge in electricity and electronics, otherwise device might be irrecoverably damaged.

System should be assembled in metal housing 7TRP40/DSPR as recommended. Housing should be mounted inside the premises, at hard visible place.

Use double isolated cable 3x0,75 mm^2 for 230V power supply. Circuit breaker or other surge protection device should be installed in the 230V power line.

For over-current protection, a two-pole protection device, capable to disconnect the maximal possible failure current (VF230-AC) should be installed into the power supply at the short-circuit room. The dividing gap between the disconnection terminals should be at least 3mm.

Ground terminal of the GsmAlarm-600 central unit is connected to the functional ground terminal of the metal box.

Antenna is fixed on the top of outer side of metal housing.

It is recommended to use standard motion (e.g., SRP-300) and fire (e.g., E318-4) sensors in alarm system. Use standard 6-8 wired single core cable designed for installation of security systems. Siren DC12V 500mA (e.g., MR-100) is recommended for sound alarm use double isolated cable 2x0,75 mm^2 to connect it to the system. Backup battery must be PB-acid (e.g., CT7-12).

It is recommended to install remote control relays into sockets (e.g., F95913) which can be easily fixed to metal housing. Operating current of relay coil cannot exceed 70mA max. (e.g., F4031-12). Relays are selected depending on desirable commutative voltage and current.

Connection according to the wiring diagram presented in Chapter 4.2.1 is recommended, if the system is controlled by a keypad. Up to 4 Paradox K636, K10V/H (MG10LEDV/H), K32 (MG32LED), K32LCD (MG32LCD) or TM50 keypads can be connected to GsmAlarm-600 Each of the said keypads has a single keypad zone (the blue wire Use of keypad zones is recommended for connection of magnetic door sensors. Activation of a keypad zone is described in Chapter 5.7.21. In case of TM or TM50 keypad, it is recommended to switch off the StayD indication (see Ch. 5.7.28). On other types of keypads, StayD indicator is on, when all zones are closed and the system can be armed.

Connection according to the wiring diagram presented in Chapter 4.2.2 is recommended, if the system is controlled by iButton (DALLAS) keys DS1990A or a simple switch. Short beeps are generated by an ancillary buzzer while exiting a room and a continuous sound, after entering the room. Any buzzer with power supply of 12 V DC and maximum operating current of 100 mA may be used (e.g., BPT-23CXW-1). The system status LED indicator woks in sync with the “MODE” indicator (see Ch. 3.2). The state of this indicator allows identification of the alarm system status and verification of closure of all protected zones before arming the alarm system. The status indicator should be mounted indoors in a well visible location. The reader DS9092LED of iButton keys is equipped with an embedded LED indicator that can be used as system status indicator.

If the system is controlled by an ON/OFF switch, the system is armed by opening the switch contacts and disarmed by closing the contacts.

Input circuits are connected according to corresponding diagram provided in Chapter 4.2.4 It is recommended to turn off zones that aren‘t used – to change value of A parameter to “A00” (see Ch. 5.3.1.1).

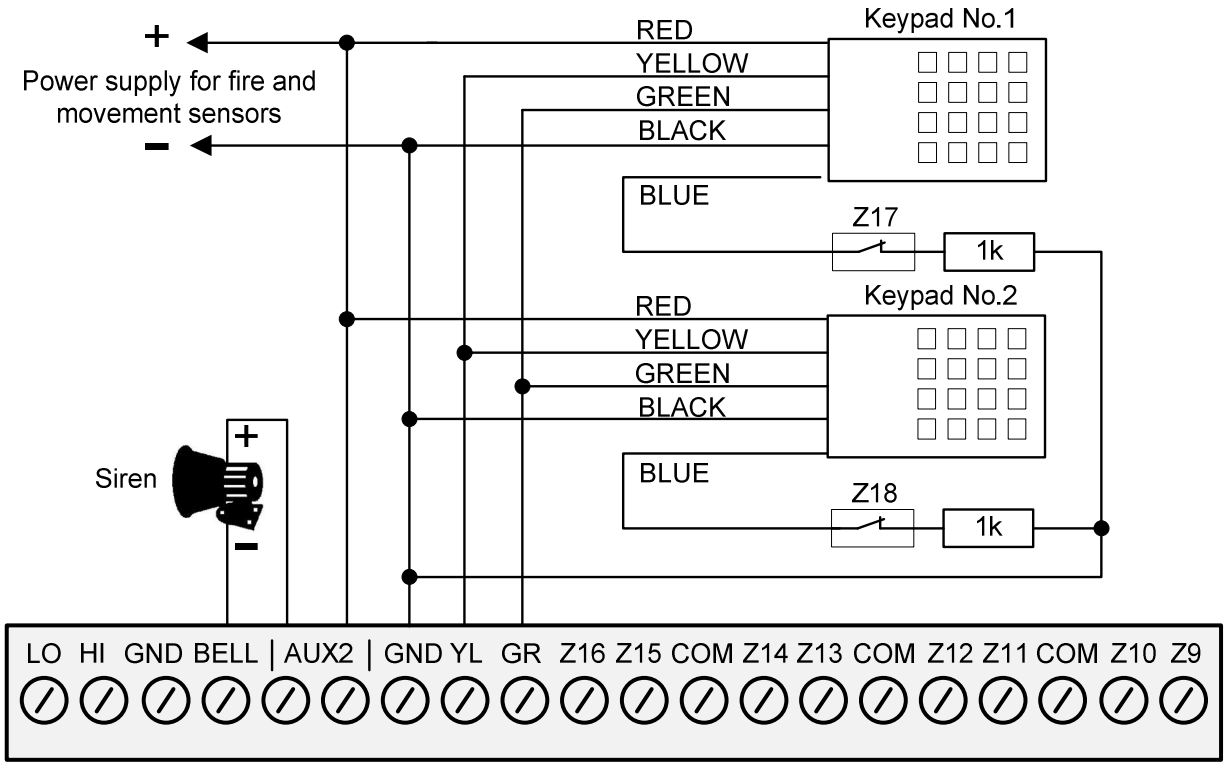
A SIM card needed for GsmAlarm-600 operating, you may acquire it from any GSM service provider. Before inserting SIM card into GsmAlarm-600 SIM card slot set PIN code request off. It can be performed simply inserting SIM card into any standard mobile phone and following certain phone user manual instructions. Verify that the SMS card is operational: try calling and sending an SMS from the phone itself.

After finishing installation, insert SIM card into GsmAlarm-600 SIM card slot, turn system power on, then wait until LED "NETWORK" will start to flash and LED "*MODE"* will be constantly alight. In case "*NETWORK"* is constantly alight, check if SIM card's PIN code request is off and GSM antenna is connected. GSM signal quality can be evaluated according the blinking frequency of "*NETWORK"* indicator. Connection is very good if it blinks 5 times with short break after. "*NETWORK"* indicator blinking fewer times, indicates weaker connection. System works in steady state if indicator blinks 3-5 times. Position of GSM antenna might be changed in order to improve signal quality.
Perform system programming when the system is disarmed. Protected zones must be closed (indicator "*MODE"* constantly alights). Detailed programming description can be read in Chapter 5.

Capability to connect wireless sensors and Ethernet will be implemented in the later versions of the device.

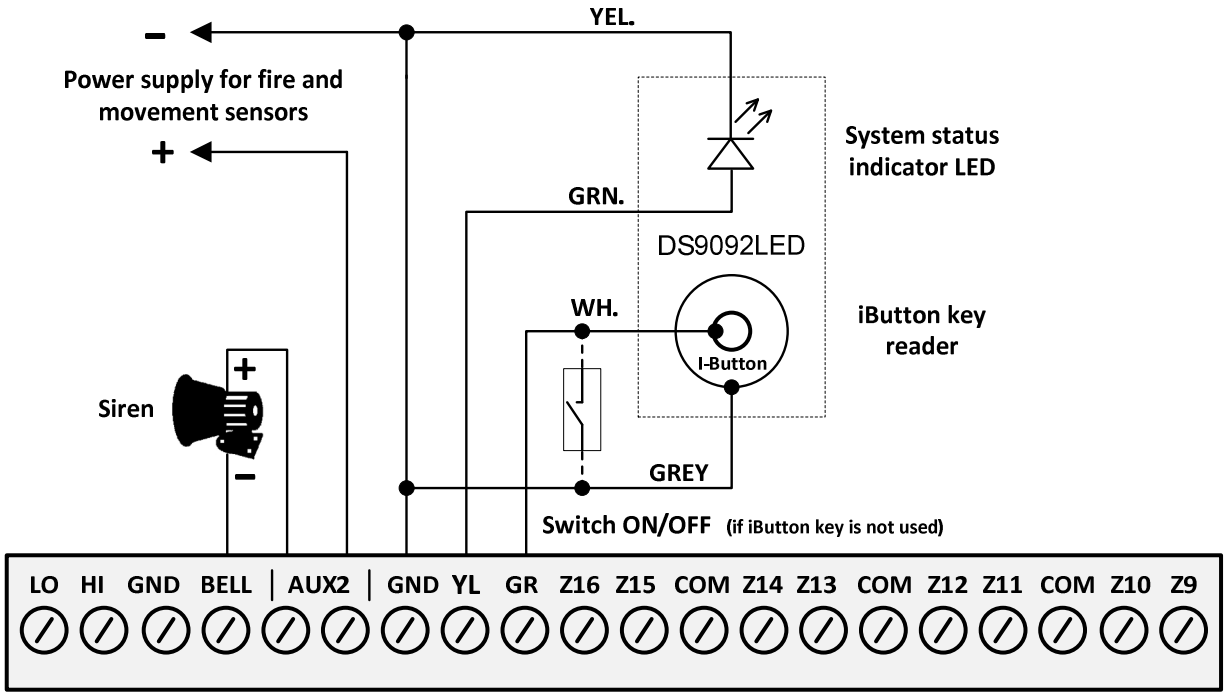
4.2. WIRING DIAGRAMS

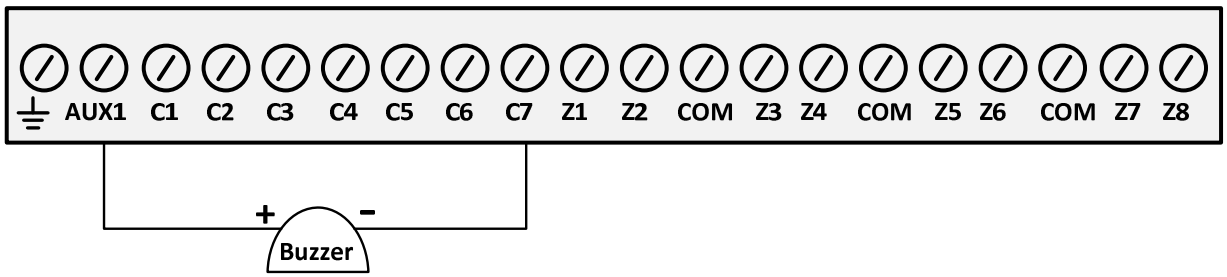
4.2.1. SYSTEM WITH KEYPAD ACCESS CONTROL



Can be used up to 4 keypads. The keypads are connected parallelly. The siren is controlled by the „minus" signal, i.e. the active output is connected to the ground conductor (GND).

4.2.2. SYSTEM WITH iBUTTON ACCESS CONTROL


YEL.
Power supply for fire and movement sensors
System status indicator LED
GRN.
DS9092LED
WH.
iButton key reader
I-Button
Siren
GREY
Switch ON/OFF (if iButton key is not used)
LO HI GND BELL AUX2 GND YL GR Z16 Z15 COM Z14 Z13 COM Z12 Z11 COM Z10 Z9



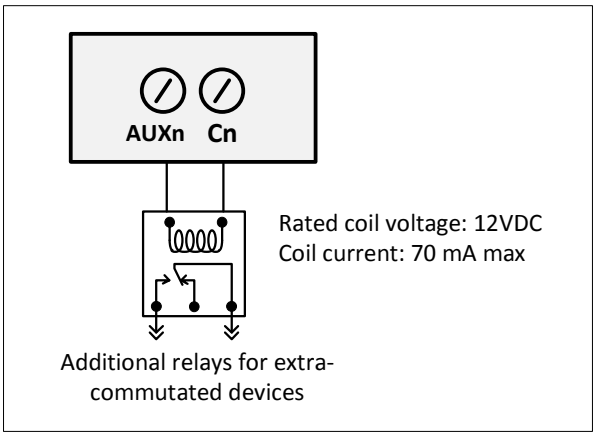
Additional sound alarm (BPT-23CXW-1)

If a DALLAS key is to be used, enable control by DALLAS keys in the system settings (use GAPROG application: General parameters->Control->Dallas keys). Auxiliary buzzer operates on entering the room (until the system is disarmed). On exit, it beeps while the time counts down the exit time. The output C7 is set at the factory to work in the mode of the auxiliary buzzer. Any other output may be used after the corresponding change of the operating mode. If the system is to be controlled by a switch, enable control by a switch (use GAPROG application: General parameters->Control->Switch) .

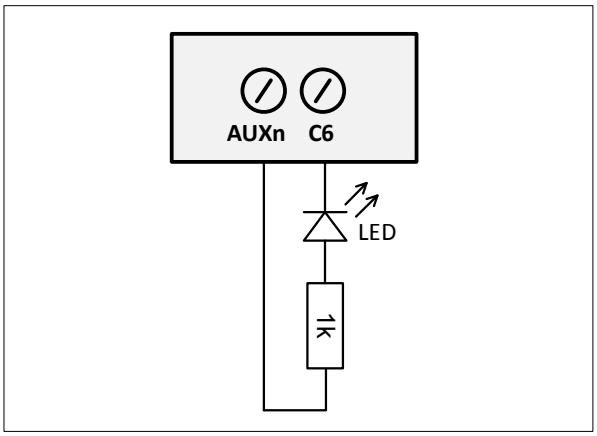
The siren is controlled by the „minus“ signal: the output in the active state is connected with the ground conductor (GND).

4.2.3. OUTPUTS C1 - C7 WIRING DIAGRAMS

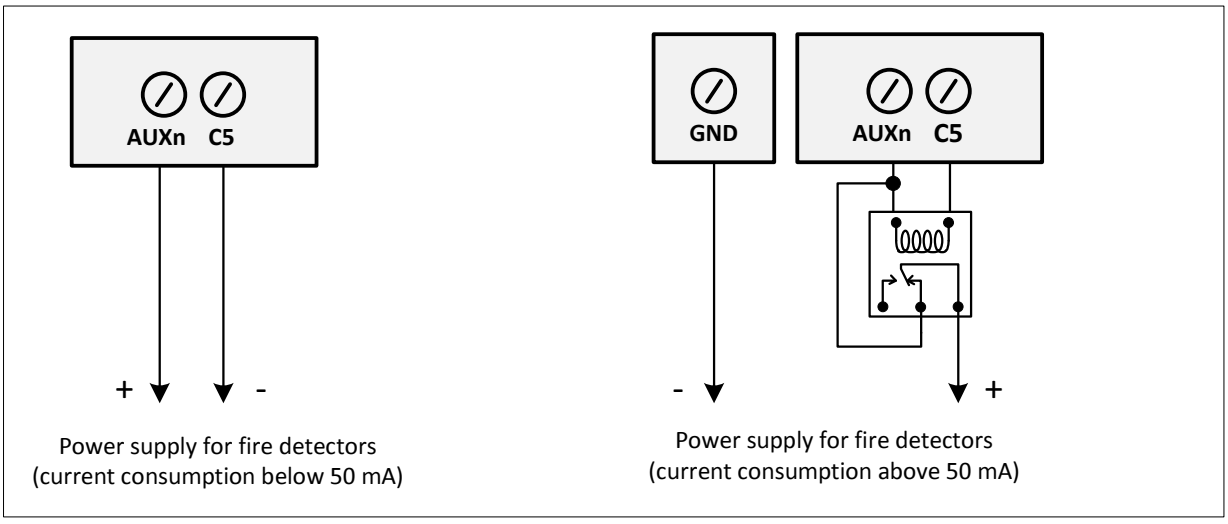
Programmable outputs can be used for remote control relays, additional LED indicator or additional audible buzzer connecting (see. Ch. 3.2.2). Devices, connected to outputs C1...C7, are controlled by the „minus“ signal: the output in the active state is connected with the ground conductor (GND).



remote control relay wiring diagram



LED indicator wiring diagram



Fire sensors power supply wiring diagram

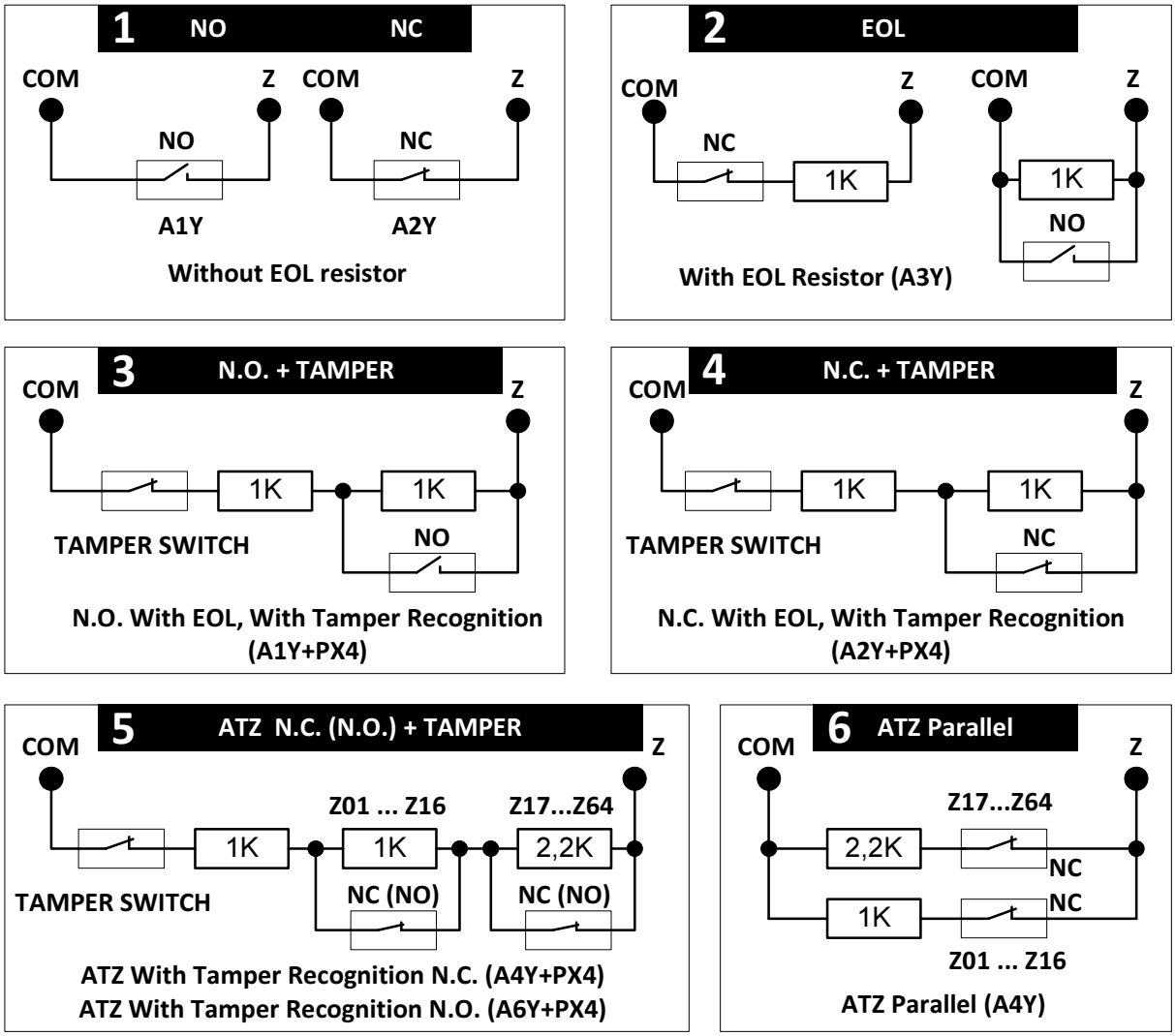
Output operation mode can be set by SMS (see Ch. 4.3.2.1), keypad (see. Ch 5.7.11) or configuration tool GAPROG (System parameters->PGM outputs). If siren is not used, output BELL can be used for remote control.

Connection of fire sensor power supply is recommended according one of the provided schemes. The fire sensors after tripping remain in the tripped state until the power supply is reset. The recommended schemes allow disconnection of the power supply for 5 seconds by simultaneously pressing keypad keys CLEAR and ENTER. Sensor power supply can be reset by the SMS or DTMF command.

Output	Name	Mode and operation time	Inversion	Activation conditions
C1	Out C1	M01 T00	No	DTMF, SMS or timer command. Output state is unchanged.
C2	Out C2	M01 T00	No	DTMF, SMS or timer command. Output state is unchanged.
C3	Out C3	M01 T05	No	DTMF, SMS or timer command. Output is active for 5 seconds.
C4	Out C4	M05 T05	No	Control by a short call when number recognition function is enabled (gate operation mode).
C5	Out C5	M81 T05	Yes	Reset of fire sensor power supply (keypad keys CEAR+ENTER)
C6	Out C6	M02 T00	No	Auxiliary work mode LED indicator (operates together with the indicator „MODE“).
C7	Out C7	M80 T00	No	Auxiliary buzzer.
BELL (C8)	Siren	M06 T02	No	Siren (operates for 2 minutes).

Manufacturer-programmed output modes

4.2.4. WAYS TO CONNECT ALARM ZONES Z1 - Z16



NC: normally closed contacts. NO: normally open contacts.
A1Y-A6Y: zone operating modes, parameter A (see Chapter 5.3.1.1).
PX4: tamper detection mode, the second digit of P parameter (see Ch. 5.3.1.3).

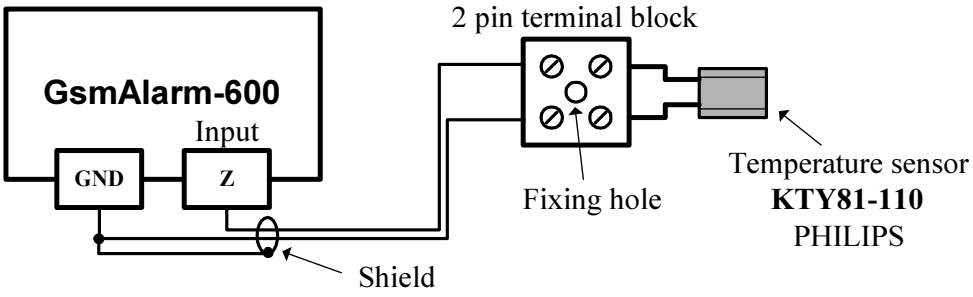
GsmAlarm-600 has 16 inputs Z1...Z16, corresponding to the zone numbers Z01...Z16. If 16 zones are sufficient for protection of the object, the wiring diagrams 1, 2, 3 or 4 may be deployed. Load resistors are mounted in the housing of an alarm sensor or a magnetic contact at the furthest point of the connecting cable.

Tamper detection mode should be enabled when connected after scheme 3 or 4 (see Ch. 5.3.1.3). The failure signal is generated and thus the alarm is activated upon cutting or short-circuiting the line. When in 24 hour tamper mode (see Ch. 5.3.3.5), the alarm is activated whether the system is armed or disarmed.

If 16 zones are insufficient, the wiring diagrams 5 and 6 may be deployed. In this case, one input can control two zones.

4.3. CONNECTION OF TEMPERATURE SENSORS

GsmAlarm-600 has temperature measurement possibility. Up to 16 temperature sensors *KTY81-110 (PHILIPS)* can be connected to the GsmAlarm-600.



In order to minimize influence of external interferences and measurement error, it is recommended to use shielded twisted pair cable 0.5 mm². Shield is connected to ground wire only in one end, close to GsmAlarm-600 board. Use 2 pins terminal block with a fixing hole for temperature sensor fastening.

Parameter "A" must be changed in order to activate temperature measurement mode. (see Ch. 5.3.1.1). Input parameter T defines zone triggering temperature. The triggering temperature can be programmed in -40 ºC ... +99 ºC rage (T-50 … T99) by SMS (see. Ch. 5.3.1) or -40 ºC … +120 ºC by computer. Using the keypad temperature can be programmed only in 0 … +99 ºC range. The temperature difference, at which triggered zone returns to primary state (hysteresis) complies with the parameter I (see. Ch. 5.3.1).

In temperature measurement mode input operates the same as in protection mode, i.e. all operating modes are valid with two exceptions:

a) No entry delay in *A80 A90*, system generates alarm instantly, after temperature reaches programmed value (see Ch. 5.3.1.1);
b) No prohibition for arming, i.e. user can arm the system although temperature measurement zone has been triggered..

Recommended values of parameter M: M40 or M00 (see Ch. 5.3.1.2). In first case, if the system is in armed mode and temperature reaches programmed value, user receives SMS message (siren will not turn on and system will not dial)
In the second case, the temperature measurement partition serves only information purpose. The user may request an SMS message with temperature indications (see Ch. 15).

If two triggering temperatures are required, an extended zone (Z7…Z15) may be assigned to the main temperature zone (Z1…Z6). The A8Y mode or A9Y mode should be activated for the ancillary temperature zone (see Ch. 5.3.1.1). The extended temperature zone operates according to the temperature measured by the main temperature zone. The number of the main temperature zones should correspond to the number of the extended temperature zones.

In order to receive information about the temperature, send GsmAlarm-600 the following SMS:

A	A	A	A	A	A	A	A		9	8	*

5. PROGRAMMING

5.1. GENERAL PROGRAMMING INSTRUCTIONS

It is recommended to perform the system setup and tuning by a computer via USB port, using the GSM alarm configuration tool GAPROG. The GsmAlarm-600 main board is connected to the computer with a standard USB A-B cable. The configuration tool is downloadable from the website of the manufacturer: www.eltech.lt.

The GSM alarm configuration tool GAPROG allows setting up of the system over the internet (see Ch. 5.9).

If a computer is unavailable, the system is set up by a keypad or SMS messages.

GsmAlarm-600 parameters can be divided into two groups. First group – user phone numbers which are stored in SIM card memory. User phone numbers can be programmed by using standard mobile phone of any type (see Ch. 5.2.1) or remotely, sending SMS message with the phone numbers of users to GsmAlarm-600 (see Ch. 5.2.2)..

Second group – parameters, defining system operating algorithms, names of protected zones and programmable outputs. These parameters are stored in the memory block of GsmAlarm-600 device. System parameters can be set by an SMS message (see Ch. 5.3) The parameters of the system can be programmed by sending SMS message (see Ch 5.3) or by using Paradox keypad (see Ch. 5.7).

It is recommended to change the SMS password at the end of programming (see Ch. 5.6).

5.2. USER AND ALARM MONITORING STATION NUMBERS

If GsmAlarm-600 is used for protection, five user numbers can be programmed: *ALRNR1, ALRNR2, ALRNR3, ALRNR4* and *ALRNR5*, and two alarm monitoring station numbers can also be programmed: *CIDNR1, CIDNR2*. Users can arm/ disarm the system, calls will be directed and SMS messages will be sent to these users. If only one user exists, he must be programmed under ALRNR1. GsmAlarm-600 will send SMS messages to this specific user in case of main power supply loss or if an unknown number calls the system. If the system is armed or disarmed with the single touch of the keypad or by turning the switch ON/OFF (if the keypad is not used) control dials and SMS messages are also directed to the first user. Other four user numbers are not obligatory.

When a security service is employed, one or two numbers of the security service central control panel should be programmed.

In case GsmAlarm-600 is used only for gate control it is not necessary to program *ALRNR1-ALRNR5.* Up to 250 user numbers, with the possibility to control the outputs C1, C2, C3, C4, C5, C6, C7 and C8 (BELL). Any name can be ascribed to user. Output operating mode has to be *M04* or *M05* (see Chapter 5.3.2.1).

The system parameters and zone names are programmed after programming user numbers (see Ch. 5.3).

5.2.1. PROGRAMMING WITH STANDARD MOBILE PHONE

Insert SIM card into a standard mobile phone. Enter user name into SIM card number book using capital letters e.g. *ALRNR1* and corresponding phone number. We recommend enter the number with international code. (E.g. +370...). If GsmAlarm-600 is used for gate control, number of extra user numbers can be as large as fits into the SIM card (up to 250). Any name can be assigned to extra user. Also the user number can be assigned to control only the selected output. In this case, the controlled output name (C1, C2, C3 or C4) must be included in the user name, e.g.: JOHN-C1, USER01-C2, USER128-C4 and similar. There is a possibility to control each output by one touch command (pushing one button on the cell phone keypad). In this case C0 must be included in the user name (e.g. PETER-C0). In this case the system answers an incoming call immediately and the user has half minute to press the button on his cell phone. The button [**1**] activates the output C1, [**2**]: C2, [**3**]: C3 and [**4**]: C4. Call is automatically terminated after activation of the output or after half minute (if nothing is done)

When programming alarm monitoring station number you must use capital letters and enter name: CIDNR1 (CIDNR2) and number (numbers) of alarm monitoring station.

Important!
It's important to note that while programming SIM card memory should be active (not phone memory). Otherwise the user number will be recorded in the mobile phone memory used for programming and the SIM card will remain empty.

Important! *When programming supplementary numbers take care to avoid the same numbers as for ALRNR1-ALRNR5, CIDNR1, and CIDNR2.*

After having programmed all user numbers, it is recommended to check whether SMS service center number is programmed. Simplest way to check: send any SMS from the phone used for programming. If it is sent successfully we can be sure that SMS centre number has been programmed correctly. Otherwise, program SMS center number following the mobile phone's user manual. SMS center number can be learnt from GSM service provider. After completion of programming and checking whether SIM card PIN code request is switched off, take the SIM card off from the mobile phone and insert it into GsmAlarm-600 SIM card slot.

5.2.2. PROGRAMMING WITH SMS

The system in this case should be enabled, the indicator NETW should be blinking, and the indicator MODE, be constantly on.

In order to program the main user numbers, send the following SMS from any mobile phone into GsmAlarm-600:

| | | |

Important:

a) No characters/spaces can be used before the password;
b) No spaces are allowed before and after the colon;
c) Spaces must follow the password and each phone number;
d) It is recommended to enter user numbers with international code (e.g. +123…)..

It is not necessarily to send all user numbers. e.g., in order to program only the first user number, send the following SMS:

A	A	A	A	A	A	A	A		A	L	R	N	R	1	:	+	3	7	0	6	1	2	3	4	5	6	7	8	9

Receipt and decrypting of the SMS by GsmAlarm-600 is confirmed by blink of indicator *MODE*. The phone, which has sent the programming SMS, immediately receives a confirming SMS with programmed numbers..

In order to delete unnecessary number, send the following SMS:

A	A	A	A	A	A	A	A		A	L	R	N	R	2	:	N

Number ALRNR2 is deleted; user receives SMS with programmed numbers. In order to replace one number with another, no separate instruction for deletion needs to be sent..
In order to receive SMS with programmed numbers ALRNR1 ... ALRNR5, send GsmAlarm-600 the following SMS:

A	A	A	A	A	A	A	A		N	R	I	N	F	O

Extra user numbers (only for gate control) are programmed by sending the following SMS:

A	A	A	A	A	A	A	A		A	D	D	N	R	:	+	3	7	0	1	2	3	4	5	6	7	8	9	1		A	D	D	N	R	:	+	3	7
0	7	0	1	2	3	4	5	6	7	8	9	2		A	D	D	N	R	:	+	3	7	0	1	2	3	4	5	6	7	8	9	3							

ADDNR: – new number programming instruction.
+3701234567891 – new user number.

If the numbers programmed successfully, the user, who sent the message, receives SMS with newly programmed number. In this case the confirmation message will be:

A	A	A	A	A	A	A	A		A	D	D	N	R	-	C	1	:	+	3	7	0	1	2	3	4	5	6	7	8	9	1		A	D	D	N	R	-
C	2	:	+	3	7	0	1	2	3	4	5	6	7	8	9	2		A	D	D	N	R	-	C	3	:	+	3	7	0	1	2	3	4	5	6	7	8
9	3		A	D	D	N	R	-	C	4	:	+	3	7	0	1	2	3	4	5	6	7	8	9	4															

The first number controls only the output C1, the second, C2, the third, C3, the fourth, C4 (K1, K2). To control any output by one-touch command, write: ADDNR-C0:+370123456789.

Up to 8 user numbers might be programmed with one SMS message. If the numbers programmed successfully, the user, who sent the message, receives SMS with newly programmed number.

In order to delete the extra user number, send to GsmAlarm-600 the following message:

A	A	A	A	A	A	A	A		D	E	L	N	R	:	+	3	7	0	1	2	3	4	5	6	7	8	9	1		D	E	L	N	R	:
+	3	7	0	1	2	3	4	5	6	7	8	9	2		D	E	L	N	R	:	+	3	7	0	1	2	3	4	5	6	7	8	9	3			

Specified numbers will be deleted and user receives the confirming SMS:

DELET:+3701234567891 DELET:+3701234567892 DELET:+3701234567893

Up to 8 user numbers might be deleted with one SMS message.

In order to receive SMS message indicating all programmed numbers, following message must be sent to GsmAlarm-600:

A	A	A	A	A	A	A	A		N	R	L	I	S	T

User receives one or more SMS messages with all programmed numbers listed.

Note! *Up to 8 user numbers can be sent in one SMS message. If 250 numbers are programmed GsmAlarm-600 will send 32 SMS messages!*

5.3. PROGRAMMING SYSTEM PARAMETERS WITH SMS

First, it is recommended to receive SMS with programmed parameters and then to send the same SMS with corrected parameters back to GsmAlarm-600.

5.3.1. PROGRAMMING ZONES Z1-Z64

In order to receive SMS with zone Z1 – Z32 parameters, send GsmAlarm-600 the following SMS:

A	A	A	A	A	A	A	A		Z	P	A	R	A	M	1

In order to receive SMS with zone Z33 – Z64 parameters, send GsmAlarm-600 the following SMS:

A	A	A	A	A	A	A	A		Z	P	A	R	A	M	2

If SMS password is disabled (see Ch. 5.3.3.4), entering the password (AAAAAAAA) is not required. GsmAlarm-600 confirms reception of the message by a series of fast blinks of indicator MODE and sends eight SMS messages with parameters of inputs Z1 - Z32. One message includes parameters of four zones. A received message with input Z1 ... Z4 parameters looks like this:

AAAAAAAA Z01:A30M70P10I06T20 Zone_1, Z02:A30M70P10I06T00 Zone_2, Z03:A30M70P10I06T00 Zone_3, Z04:A30M70P10I06T00 Zone_4,

AAAAAAAA – password.

Z01: **-** zone input number. Zones Z01 ... Z16 correspond to inputs Z1 ... Z16. Zones Z33 ... Z64 can operate as supplementary zones (of keypad, temperature or expanded ATZ).

A30 - parameter defines operating mode of the corresponding input (see Ch. 5.3.1.1)

M70 - parameter defines system response to the violation of protected zone and which users are informed if certain zone sensors are triggered (see Ch. 5.3.1.2).

P10 - partial arming mode. Tamper recognition mode (see Ch. 5.3.1.3).

I06 - I02 - the pulse counting mode (hysteresis in temperature measurement mode). When the first number is larger than 1, the zone operates in the pulse counting mode. After the zone triggers N number of times during the preset duration, the system switches over to the alarm state. N: the first digit. The second number establishes the duration of pulse counting. Multiplication of this number by 10 produces the time in seconds. Minimal time: 10 seconds (1), maximal time: 90 seconds (9). The factory preset time: 60 seconds. If N=0 or N=1, the pulse counting mode is switched off. In temperature measuring mode, parameter **I** complies hysteresis (temperature difference, at which triggered zone returns to primary state).

T20 – - entry delay. If the system is armed and relevant input is triggered, the system switches siren on and sends SMS only after expiration of the given delay time. Possible values: 0...99 seconds.

If zone is in temperature measurement mode (A8Y or A9Y) (see Ch. 5.3.1.1), value of T parameter corresponds to triggering temperature. Possible values: -99 ºC ... 99 ºC.

Zone_1, Zone_2, Zone_3, Zone_4 – zone names, which are seen in the SMS after alarm triggering. User can change the name of zone under his own discretion. Maximum number of name characters: 20.

5.3.1.1. PARAMETER *A*: *INPUT ZONE TRIGGERING CONDITIONS* Addr: [301-364]

Input zone triggering conditions	AXY		Zone operating mode
	X	Y	
Input disabled.	0	0	With delay. *1)*
Without a load resistor when tamper recognition is off. If tamper recognition is on (see Ch. 5.3.1.3), 1kΩ and 2.2kΩ load resistors in series are required. Triggers when contacts close (**NO**, see Ch. 4.2.4)..	1	1	*24H zone*. After relevant zone is being triggered, the system generates alarm in armed or disarmed mode, siren operates constantly and delay time is ignored.
Without a load resistor when tamper recognition is off. If tamper recognition is on (see Ch. 5.3.1.3), 1kΩ and 2.2kΩ load resistors in series are required. Triggers when contacts opened (**NC**, see Ch. 4.2.4).	2	2	Fire zone. The system generates alarm in armed or disarmed mode. Siren operates with interruptions.
EOL mode, load resistor is required (see Ch. 4.2).	3	3	*ON/OFF zone*. Mode designated to arm or disarm the system if keypad is not used.
ATZ mode. Triggers when contacts opened (**NC**). Parallel connected 2.2kΩ and 4.7kΩ load resistors are required if tamper recognition is off. 1kΩ and 2.2kΩ load resistors in series are required, if tamper recognition is on (see Ch. 5.3.1.3).	4	4	Follow zone. *2)*
-	5	5	*Dual activation delay zone*. *3)*
ATZ mode with tamper recognition. Triggers when contacts close (**NO**). Tamper recognition must be on, 1kΩ and 2.2kΩ load resistors in series are required (see Ch. 4.2.4).	6	6	*Dual activation 24-hour zone*. *3)*
-	-	7	*Force arm, Delay zone0*
Temperature measurement mode. Alarm is activated if measured temperature overcomes programmed temperature T.	8	8	*Force arm, Follow zone.* Force arming allows to arm the system without waiting for all zones to close.
Temperature measurement mode. Alarm is activated if measured temperature is lower than programmed temperature T.	9	-	-

1) The zone with a programmable delay time. Alarm after a breach of the protected zone is triggered only when the system is armed and after the preset delay time T expires. If T=0, the alarm activates immediately (instantaneous zone).

2) Follow zone. After violation of this zone alarm goes on immediately, if other zone with delay isn‘t violated. If firstly zone with delay is violated (for example, doors are opened), “follow” zone receives delay time of earlier violated zone. It is recommended to apply this mode to motion sensor zone, if sensor is installed before the entry doors to the room.

3) System is responding both to zone activation and restoring in dual activation mode. After activation of the zone, system is responding in the same way as in mode "0" and "1". After zone restoring (when zone comes back to the initial state), system doesn't call and doesn't turn on the siren. Users receive only SMS message (if SMS message sending is activated; see Chapter 5.3.1.2).

5.3.1.2. PARAMETER "*M": SYSTEM STATE AFTER INPUT TRIGGERING*

Addr.: [401-464]

Type of alarm after input triggering	**M**XY		Users, getting information about zone violation.
	X	Y	
All functions, described below, are deactivated.	0	0	All (ALRNR1-ALRNR5)
Only siren is operating.	1	1	Only user ALRNR1
System is calling.	2	2	Only user ALRNR2
Siren and calling.	3	3	Only user ALRNR3
System is sending SMS message.	4	4	Only user ALRNR4
Siren and SMS.	5	5	Only user ALRNR5
Calling and SMS.	6	6	Users ALRNR1 and ALRNR2.
Siren, calling and SMS.	7	7	Users ALRNR1, ALRNR2 and ALRNR3.
-	-	8	Users ALRNR1, ALRNR2, ALRNR3 and ALRNR4.
-	-	9	All (ALRNR1-ALRNR5), but not the alarm monitoring station .

***Important**: alarm monitoring station is informed when data transfer to monitoring station is turned on (*see Ch. 7.3*), number **X** is higher than 0 and number **Y** isn't equal to 9.*

5.3.1.3. PARAMETER *"P" PARTITION ASSIGNMENT AND PARTIAL ARM METHODS: STAY, SLEEP,* TAMPER RECOGNITION. Addr.: [501-564]

Partition assignment	*PXY*		Partial arming mode STAY and SLEEP. Tamper detection.
	X	Y	
-	0	0	All functions listed below are disabled. Zone is active in full arming mode.
Zone assigned to the first partition	1	1	Zone is active in STAY mode and in full arming mode.
Zone assigned to the second partition.	2	2	Zone is active in SLEEP mode and in full arming mode.
Zone assigned to both partitions.	3	4	Tamper detection mode enabled.

Manufacturer-programmed value: P10.

Important ! *The sum of corresponding digits should be used to activate several Y functions. Example: the number Y must be 7 (1+2+4=7) to activate all functions.*

5.3.2. PROGRAMMING OUTPUTS C1-C7, BELL (C8)

In order to receive SMS with output and common system parameters, send GsmAlarm-600 the following SMS:

A	A	A	A	A	A	A	A		C	P	A	R	A	M

If SMS password deactivated (see. Ch. 5.3.3.4), it is not necessary to write password (AAAAAAAA). Receiving the message is confirmed by blinking of indicator "*MODE"*, SMS with current system parameters is being sent:

AAAAAAAA C01:M01T00V00 OutC1, C02:M01T00V00 OutC2, C03:M01T05V00 OutC3, C04:M05T05V00 OutC4,

C1: - number of programmable output.

M01 - output operating mode (see Ch. 5.3.2.1) .

T00 - output operating time.

V00 - output operating time units (minutes/seconds) and operating mode (see Ch. 5.3.2.2).

OutC1 - OutC4 - programmable output names. User can change the name under his own discretion. Maximum number of name characters: 20.

5.3.2.1. OUTPUTS C1-C8 (BELL) OPERATING MODE. Addr.:[471-478]

Output mode	Explanation of operating
M00	Output is deactivated.
M01	Output controlled by DTMF or SMS instructions. If zero operating time is programmed (T00), output is activated/deactivated and remains in the same state after receiving DTMF or SMS instruction. If not zero operating time is programmed, after receiving DTMF or SMS instruction, output is activated, it deactivates automatically after expiration of the programmed time.
M02	System state indicator mode. Output is in operating together with MODE indicator.
M03	Output is activated, when system is armed. Open contact, when system is disarmed.
M04	Control by short call without number recognition function. Output is activated with a call from any number. If zero operating time is programmed *(T00),* output state changes after a call and remains unchanged till the next short call. If not zero operating time is programmed, after receiving short call instruction output is activated, it deactivates automatically after expiration of the programmed period.
M05	Control by short call with number recognition function (gate control mode). This mode operates analogue to *M04*, thus it is activated only if short call number coincides with programmed numbers
M06	Siren mode.
M07	Siren mode with audible confirmation. After arming, one short audible beep is heard. After disarming, two short audible beeps are heard.
M08	Output is activated in case of wiring trouble of fire sensor.
M09	Output is activated in case of AC mains failure.
M10	Output is activated in case of GSM signal loss.
M80	Additional audible buzzer mode.
M81	The output is activated by simultaneously pressing and holding ENTER and CLEAR keys for 3 sec. This mode is recommended for switching of power supply voltage of fire sensors. Conditions of mode M01 (M00) also persist
M82	The output is **activated** by simultaneously pressing and holding the keypad buttons 1 and 2 for 3 sec or by the command “Logical Key 1”. ** The output is **deactivated** by simultaneously pressing and holding the keypad buttons 2 and 3 for 3 sec or by the command “Logical Key 4”. **
M83	The output is **activated** by simultaneously pressing and holding the keypad buttons 4 and 5 for 3 sec or by the command “Logical Key 2”. ** The output is **deactivated** by simultaneously pressing and holding the keypad buttons 5 and 6 for 3 sec or by the command “Logical Key 5”. **
M84	The output is **activated** by simultaneously pressing and holding the keypad buttons 7 and 8 for 3 sec. or by the command “Logical Key 3”. ** The output is **deactivated** upon simultaneously pressing and holding the keypad buttons 8 and 9 for 3 sec or by the command “Logical Key 6”. **
M11	Output state depends on the state of zone Z1. *
M12	Output state depends on the state of zone Z2. *
M13	Output state depends on the state of zone Z3. *
M14	Output state depends on the state of zone Z4. *
M15	Output state depends on the state of zone Z5. *
M16	Output state depends on the state of zone Z6. *
M17	Output state depends on the state of zone Z7. *
M18	Output state depends on the state of zone Z8. *

M19	Output state depends on the state of zone Z9. *
M20	Output state depends on the state of zone Z10. *
M21	Output state depends on the state of zone Z11. *
M22	Output state depends on the state of zone Z12. *
M23	Output state depends on the state of zone Z13. *
M24	Output state depends on the state of zone Z14. *
M25	Output state depends on the state of zone Z15. *
M26	Output state depends on the state of zone Z16. *
M27	Output state depends on the state of zone Z17. *
M28	Output state depends on the state of zone Z18. *
M29	Output state depends on the state of zone Z19. *
M30	Output state depends on the state of zone Z20. *
M31	Output state depends on the state of zone Z21. *
M32	Output state depends on the state of zone Z22. *
M33	Output state depends on the state of zone Z23. *
M34	Output state depends on the state of zone Z24. *
M35	Output state depends on the state of zone Z25. *
M36	Output state depends on the state of zone Z26. *
M37	Output state depends on the state of zone Z27. *
M38	Output state depends on the state of zone Z28. *
M39	Output state depends on the state of zone Z29. *
M40	Output state depends on the state of zone Z30. *
M41	Output state depends on the state of zone Z31. *
M42	Output state depends on the state of zone Z32. *
M43	Output state depends on the state of zone Z33. *
M44	Output state depends on the state of zone Z34. *
M45	Output state depends on the state of zone Z35. *
M46	Output state depends on the state of zone Z36. *
M47	Output state depends on the state of zone Z37. *
M48	Output state depends on the state of zone Z38. *
M49	Output state depends on the state of zone Z39. *
M50	Output state depends on the state of zone Z40. *
M51	Output state depends on the state of zone Z41. *
M52	Output state depends on the state of zone Z42. *
M53	Output state depends on the state of zone Z43. *
M54	Output state depends on the state of zone Z44. *
M55	Output state depends on the state of zone Z45. *
M56	Output state depends on the state of zone Z46. *
M57	Output state depends on the state of zone Z47. *
M58	Output state depends on the state of zone Z48. *
M59	Output state depends on the state of zone Z49. *
M60	Output state depends on the state of zone Z50. *
M61	Output state depends on the state of zone Z51. *
M62	Output state depends on the state of zone Z52. *
M63	Output state depends on the state of zone Z53. *
M64	Output state depends on the state of zone Z54. *
M65	Output state depends on the state of zone Z55. *
M66	Output state depends on the state of zone Z56. *
M67	Output state depends on the state of zone Z57. *
M68	Output state depends on the state of zone Z58. *
M69	Output state depends on the state of zone Z59. *

M70	Output state depends on the state of zone Z60. *
M71	Output state depends on the state of zone Z61. *
M72	Output state depends on the state of zone Z62. *
M73	Output state depends on the state of zone Z63. *
M74	Output state depends on the state of zone Z64. *

* If zero operating time is programmed (T00), output is activated when adequate zone is open and deactivated when adequate zone is closed. If not zero delay time is programmed, output is activated automatically when adequate zone is opened and deactivates automatically after expiration of the programmed time *T*.

** Outputs are controllable when system is armed or disarmed. Command "Logical Key" can be executed only by TM50 keypad.

5.3.2.2. OUTPUTS C1-C8 (BELL) OPERATION MODES. PARAMETER V.

Addr.:[481-488]

Time units	*VXY*		Inverting
	X	Y	
Seconds.	0	0	Output not inverted.
Minutes*.	1	1	Output inverted.

* In Siren mode (M06, M07) the output operating time can be programmed only in minutes

5.3.3. PROGRAMMING OF COMMON SYSTEM PARAMETERS E, F, G, H, J, K, L, P, T

In order to receive SMS with common parameters, send GsmAlarm-600 the following SMS:

A	A	A	A	A	A	A	A		S	P	A	R	A	M

If SMS password deactivated (see. Ch. 5.3.3.4), it is not necessary to write password (AAAAAAAA). Receiving the message is confirmed by blinking of indicator *MODE*, SMS with current common system parameters is being sent:

```
AAAAAAAA S01:E20F31G01H00J00K00L32P00T20,
```

S01: - command for common system parameters programming.

E20 – the way to inform user about arming/disarming. User can be informed by short call or SMS message. (see Ch. 5.3.3.1)

F31 – system response to incoming/outgoing calls and number of calls in alarm state. (see Ch. 5.3.3.2).

G01 – SMS delay time in case of the main power supply failure (see Ch. 5.3.3.3).

H00 – modes of data transfer to the alarm monitoring station. (see Ch. 7.3).

J01 – - the system response to intentional GSM jamming. Possible values: J00, J01, J02, J03.
J00: detection of jamming signal deactivated.

J01: an SMS message is sent to users after resuming of communication. The message indicates the GSM jamming onset time.
J02: detection of GSM jamming signal activates the siren.
J03: operates as the functions J01 and J02.

K00 – the method of system control.
K00: the system is controlled by a PARADOX keypad.
K01: the system is controlled by a iButton (DALLAS) keys.
K02: the system is controlled by an ON/OFF switch.

L32 – SMS structure and SMS password functionality (see. Ch. 5.3.3.4).

P00 – splitting of the system into partitioning and 24 hour tamper detection. (see. Ch. 5.3.3.5).

T20 – entry delay time. Possible values: 00 – 99 seconds.

5.3.3.1. PARAMETER E - THE WAY USER IS INFORMED ABOUT ARMING / DISARMING

Addr.:[465]

Arm notification	EXY		Disarm notification
	X	Y	
All functions below are deactivated.	0	0	All functions below are deactivated.
User is informed by SMS	1	1	User is informed by SMS
User is informed with a short call.	2	2	User is informed with a short call
User is informed with a short call and SMS message.	3	3	User is informed with a short call and SMS message.

Manufacturer-programmed value: E20.

5.3.3.2. PARAMETER F : SYSTEM RESPONSE TO INCOMING CALLS AND NUMBER OF CALLS IN ALARM STATE. Addr.:[466]

System response to incoming call	FXY		Number of calls in the alarm mode
	X	Y	
All functions below are deactivated.	0	0	-
If a call is received from unknown caller, user ALRNR1 will receive a SMS with caller‘s number.	1	1	After alarm triggering, users are called once
If calling from user‘s number, after 3-4 calls the system will pick up, armed mode will remain on.	2	2	Users are called twice
Armed mode is activated after user’s short call.	4	3	Users are called 3 times

Manufacturer-programmed value: F31.

Note! *If several functions have to be operative, sum of the numbers is used. E.g.: for all three X functions to be active, X value must be 7 (1+2+4=7).*

5.3.3.3. PARAMETER G - SMS DELAY TIME IN CASE OF POWER SUPPLY FAILURE Addr.:[166]

In the case of the mains 230V power supply failure, message is sent to user and (or) alarm monitoring station only after programmed period. If G=0 (G00), reports about failure and re-connection of the main power supply voltage wouldn‘t be generated. Possible delayed time values: G01-G99 (in minutes)
After recovery of the main power supply, report will be send after 1 minute period of time. This time cannot be programmed.

5.3.3.4. PARAMETER L - SMS STRUCTURE AND SMS MANAGEMENT PASSWORD Addr.:[369]

SMS Structure	LXY		SMS password SMS Management Password
	X	Y	
All bellow described functions are deactivated.	0	0	SMS password deactivated. The system can be configured by anybody, who knows the system telephone number.
SMS message contains a number of triggering events after the zone name.	1	1	SMS commands are executed, if SMS sender is one of the five users ALRNR1 – ALRNR5.
SMS message contains the name of the user that armed or disarmed the system.	2	2	SMS commands are executed only if the password at the beginning of SMS matches the stored password.
Warning SMS messages (failure and restoration of power supply, low battery, detection of GSM jamming) are sent to all ALRNR users (not only to ALRNR1).	4	4	SMS messages informing about turning on (turning off) arming mode will be sent to all users (ALARNR1 … ALARNR5)

Manufacturer-programmed value: L32.

Important! *To activate several functions the total of numbers should be used. Example: To activate all three functions the digit X should be 7 (1+2+4=7).*

5.3.3.5. PARAMETER P – DIVISION OF THE SYSTEM INTO PARTITIONS TAMPER DETECTION

Addr.:[368]

Tamper detection.	PXY		Division into partitions
	X	Y	
All functions listed below are disabled.	0	0	Undivided.
-	1	1	The system is split into two partitions.
24 hour tamper detection mode enabled.	4		

Manufacturer-programmed value: P00.

Important ! *The sum of corresponding digits should be used to activate several X functions.*

5.3.4. PROGRAMMING PARTITION NAMES

If it is necessary to secure two objects and system is divided into two partitions, user can program names of the partitions. It is possible to receive a message with names of the partitions after sending to GsmAlarm-600 following message:

A	A	A	A	A	A	A	A		R	P	A	R	A	M

GsmAlarm-600 sends SMS message with available names of the partitions:

AAAAAAAA R1: PARTITION1, R2: PARTITION2,

After correction of the names, SMS message is sent back to GsmAlarm-600. Maximum number of the name's characters is 20.

5.3.5. SETTING SYSTEM CLOCK

System's clock should be set only if timer function is used. Time sets automatically, when GSM module connect to network (if GSM service provider does provide automatic time synchronization service).: To synchronize the system clock time with the GSM network time, send the following SMS:

A	A	A	A	A	A	A	A		T	S	I	N	C	H

The system clock time also can be set manually: in order to set system clock time (E.g. 12:45), the following SMS must be sent to GsmAlarm-600:

A	A	A	A	A	A	A	A		C	L	O	C	K	:	1	2	-	4	5		1	0	/	0	1	/	1	5

AAAAAAAA - password;
SCLOCK: - time set instruction
12-45 - time (12: 45).
10/01/15 - date (year, month, day).
Checkup of programmed system time can be performed by sending following SMS to GsmAlarm-600:

A	A	A	A	A	A	A	A		S	C	L	O	C	K

GsmAlarm-600 sends back SMS with programmed system time.

5.3.6. PROGRAMMING 24 HOUR TIMER

Timer function can activate or deactivate the programmable output, arm or disarm the system, send SMS message, etc. on a desired time.

It is recommended to receive SMS message with programmed timer parameters. To do that, following SMS message must be sent to GsmAlarm-600:

A	A	A	A	A	A	A	A		S	T	I	M	E	R

If SMS password deactivated (see. Ch. 5.3.3.4), it is not necessary to write password (AAAAAAAA). GsmAlarm-600 sends back 2 messages with current timer parameters to user::

AAAAAAAA TMR01:00,00-00 TMR02:00,00-00 TMR03:00,00-00 TMR04:00,00-00 TMR05:00,00-00
TMR06:00,00-00 TMR07:00,00-00 TMR08:00,00-00 TMR09:00,00-00 TMR10:00,00-00

AAAAAAAA - password;
TMR01...TMR10 - number of timer event. 20 independent timer events can be programmed.

:00, - timer instruction, defining which function should be performed in programmed time. Please read detailed description of timer instructions in Ch. 5.3.5.1.
00-00 - timer activation time.

Renewed SMS message has to be sent to GsmAlarm-600. User receives SMS message with newly programmed parameters after.

Examples for programming.

For the system to activate PGM output C2 on 12:30, deactivate on 13:00 and to send SMS message, informing about the state of outputs on 13:01, following SMS has to be sent to GsmAlarm-600:

A	A	A	A	A	A	A	A		T	M	R	0	1	:	2	2	,	1	2	-	3	0		T	M	R	0	2	:	2	0	,
1	3	-	0	0		T	M	R	0	3	:	7	7	,	1	3	-	0	1														

5.3.6.1. TIMER INSTRUCTIONS

Addr.: [401-410]

Timer instruction	Description of the timer instruction
00	Timer event is not active
01	Arms the whole system (regular arming).
02	Disarms the whole system.
11	Activates output C1.
10	Deactivates output C1.
22	Activates output C2.
20	Deactivates output C2.
33	Activates output C3.
30	Deactivates output C3.
44	Activates output C4.
40	Deactivates output C4.
55	Activates output C5.
50	Deactivates output C5.
66	Activates output C6.
60	Deactivates output C6.
17	Activates output C7.
07	Deactivates output C7.
18	Activates output C8.
08	Deactivates output C8.
77	Requests to send SMS message with information about output state.
80	Disarms the first partition.
81	Arms the first partition, STAY mode.
82	Arms the first partition, SLEEP mode.
83	Arms the first partition.
88	Requests to send SMS message with information about GSM signal quality and power supply voltage.
89	Transfers the test signal to security monitoring station via Contact ID protocol (see Ch. 7.3).
90	Disarms the second partition.
91	Arms the second partition, STAY mode.
92	Arms the second partition, SLEEP mode.
93	Arms the second partition.
97	Requests to send SMS with open zones only.
98	Requests to send SMS with temperature values only.
99	Requests to send SMS message with information about state of protected zones.

Note! *Command 89 is sending message to alarm monitoring station only.*

5.4. PROGRAMMING THE DESCRIPTION OF INPUT ZONE STATE.

In order to program description of input zone state (e.g. “ALARM” when zone is open or “OK” when zone is closed), following message is sent to GsmAlarm-600:

| | | |

5.7. PROGRAMMING THE SYSTEM USING THE PARADOX KEYPAD

All system parameters, except for user phone numbers and names of zones and outputs, are programmable using keypad. User numbers are programmed only by sending SMS message or by method described in Ch. 5.2.1, names – SMS message or via GAPROG program.
To program system parameters:

- Press the [**ENTER**] key
- Enter your system installer code (default code is 0000 or 000000). The lights **ARM** and **STAY** will flash, programming mode is activated.
- Select the parameter by entering a 3-digit address. The lights **ARM** and **STAY** will lit constantly.
- Enter a new 2-digit parameter.
- Press the [**CLEAR**] key to exit the programming mode.

All parameters and addresses of the parameters are provided in the table. Please see Chapters 5.7.1 – 5.7.25 for more detailed information.

Address	Parameter description	SMS parameters*
000	Installer access code (4 or 6 digits).	-
001-020	User access codes (4 or 6 digits).	-
021	CONTACT ID user identification number .	CIDACC
031-050	User code function .	-
100	Exit delay .	T (S01)
101-164	Zone operating mode: entry delay or triggering temperature .	T (Z01-Z64)
165	Short call duration	
166	Delay time of report SMS about the failure of main power supply .	G (S01)
171-178	Output operating mode: operating time .	T (C01-C08)
181-196	Temperature offset.	-
201-264	Zone response time .	-
301-364	Zone operating mode: triggering conditions .	A (Z01-Z64)
365	Mode of data transfer to alarm monitoring station .	H (S01)
366	User code length (4 or 6 digits).	-
367	Exit delay audible indication .	-
368	Dividing the system into two partitions. 24 hour tamper detection.	P (S01)
369	SMS structure and SMS password functionality.	L (S01)
370	GSM JAMMING notification .	J (S01)
371	Backup battery monitoring	-
372	StayD indication.	-
401-464	Input operating mode: alarm state after input triggering .	M (Z01-Z64)
465	Informing users about arming and disarming .	E (S01)
466	Responding to unrecognized caller ID and number of calls in the case of alarm .	F (S01)
467	User notification on activation of STAY or SLEEP mode.	-
468	User notification on deactivation of STAY or SLEEP mode .	-
471-478	Output operating mode (M).	M (C01-C08)
481-488	Work modes of outputs C01-C08 (V) (time units, inversion).	V (C01-C08)
501-564	Assigning of a zone to a partition, partial arming modes STAY, SLEEP, tamper detection.	P (Z01-Z64)
601-664	Pulse counting mode or hysteresis of zones Z1-Z64.	I (Z01-Z64)
701-720	Timer events .	STIMER
801-864	Attribution of the zone indicated on the keypad to the zone of the central control unit.	-

* parameters if programming by SMS message.

5.7.1. PROGRAMMING THE ACCESS CODES

Access codes are personal identification numbers that allow you to enter certain programming modes, arm or disarm your system as well as activate or deactivate programmable outputs. The system supports 1 installer code and 20 user access codes.
User access code can arm or disarm the system, activate or deactivate programmable outputs. The installer code is used for the system programming only.
Your system can be programmed to use either 4- or 6-digit access codes (see Ch. 5.7.19), where each digit can be any value from 0 to 9. Six digit codes are considered more difficult to "crack" and therefore, more secure.

To program an Access Code:

- Press the [**ENTER**] key
- Enter your system installer code (default code is 0000 or 000000). The lights **ARM** and **STAY** will flash.
- Select a user by entering a 3-digit user number (e.g. 001 for user 1 or 020 for user 20). The lights **ARM** and **STAY** will lit constantly.
- Enter a new 4- or 6-digit access code.

To delete an Access Code:

- Press the [**ENTER**] key
- Enter your system installer code (default code is 0000 or 000000).
- Select a user by entering a 3-digit user number (e.g. 001 for user 1 or 020 for user 20). The lights **ARM** and **STAY** will lit constantly.
- Press and hold the [**SLEEP**] key until you hear the confirmation beep.

Table below describes which user will be informed about arming/ disarming the system with a short call or SMS message.

Address (user number)	User or installer access code	Which user will be informed about arming/ disarming the system *
000	Installer Access Code	-
001	1 User Access Code	ALRNR1
002	2 User Access Code	ALRNR2
003	3 User Access Code	ALRNR3
004	4 User Access Code	ALRNR4
005	5 User Access Code	ALRNR5
006	6 User Access Code	ALRNR1
007	7 User Access Code	ALRNR2
008	8 User Access Code	ALRNR3
009	9 User Access Code	ALRNR4
010	10 User Access Code	ALRNR5
011	11 User Access Code	ALRNR1
012	12 User Access Code	ALRNR2
013	13 User Access Code	ALRNR3
014	14 User Access Code	ALRNR4
015	15 User Access Code	ALRNR5
016	16 User Access Code.	ALRNR1
017	17 User Access Code.	ALRNR2
018	18 User Access Code.	ALRNR3
019	19 User Access Code.	ALRNR4
020	20 User Access Code.	ALRNR5

5.7.2. USER ACCESS CODE FUNCTIONALITY

After entering corresponding code user can arm or disarm the whole system or separate partitions, activate or deactivate programmed outputs.

Address	Parameter	Address	Parameter
031	1 user access code functionality	041	11 user access code functionality
032	2 user access code functionality	042	12 user access code functionality
033	3 user access code functionality	043	13 user access code functionality
034	4 user access code functionality	044	14 user access code functionality
035	5 user access code functionality	045	15 user access code functionality
036	6 user access code functionality	046	16 user access code functionality
037	7 user access code functionality	047	17 user access code functionality
038	8 user access code functionality	048	18 user access code functionality
039	9 user access code functionality	049	19 user access code functionality
040	10 user access code functionality	050	20 user access code functionality

Parameter value	Access Code Functionality
00	Arm mode uncontrolled
01	Arms or disarms the first partition
02	Arms or disarms the second partition
03	Arms or disarms the whole system. When a keypad is used, the partition is selected by the user (see Ch. 8.6).
10	Activates or deactivates the output C1. *
20	Activates or deactivates the output C2. *
30	Activates or deactivates the output C3. *
40	Activates or deactivates the output C4. *
50	Activates or deactivates the output C5. *
60	Activates or deactivates the output C6. *
70	Activates or deactivates the output C7. *
80	Activates or deactivates the output BELL (C8). *

Manufacturer-programmed value: 01

* Output is switched on after pressing [**ARM**] key and entering corresponding code. Output is switched off after pressing [**OFF**] key and entering corresponding code.

5.7.3. EXIT DELAY TIME

The closing code transmission takes place after the exit delay time. Therefore, if the system is armed and disarmed before the expiry of the exit time, no transmission will take place.

Possible values: 00 – 99 seconds.

Address	Parameter
100	Exit delay time .

Manufacturer-programmed exit delay time: 20 seconds.

5.7.4. PARAMETER "T": ENTRY DELAY TIME OR TRIGGERING TEMPERATURE

After the exit delay has expired, an open on the zone will cause the entry delay time to start. During the entry time the keypad buzzer will sound steady. If the system is disarmed before the entry time expires no alarm will be generated. Possible entry delay time values: 0...99 seconds.
If zone operates in temperature measurement mode, value of T parameter corresponds to triggering (alarm activation) temperature. Possible temperature values: 0...99 ºC.

Address	Parameter
101	Zone Z1 „T" parameter
102	Zone Z2 „T" parameter
103	Zone Z3 „T" parameter
104	Zone Z4 „T" parameter
105	Zone Z5 „T" parameter
106	Zone Z6 „T" parameter
107	Zone Z7 „T" parameter
108	Zone Z8 „T" parameter
109	Zone Z9 „T" parameter
110	Zone Z10 „T" parameter
111	Zone Z11 „T" parameter
112	Zone Z12 „T" parameter
113	Zone Z13 „T" parameter
114	Zone Z14 „T" parameter
115	Zone Z15 „T" parameter
116	Zone Z16 „T" parameter
117	Zone Z17 „T" parameter
118	Zone Z18 „T" parameter
119	Zone Z19 „T" parameter
120	Zone Z20 „T" parameter
121	Zone Z21 „T" parameter
122	Zone Z22 „T" parameter
123	Zone Z23 „T" parameter
124	Zone Z24 „T" parameter
125	Zone Z25 „T" parameter
126	Zone Z26 „T" parameter
127	Zone Z27 „T" parameter
128	Zone Z28 „T" parameter
129	Zone Z29 „T" parameter
130	Zone Z30 „T" parameter
131	Zone Z31 „T" parameter
132	Zone Z32 „T" parameter

Address	Parameter
133	Zone Z33 „T" parameter
134	Zone Z34 „T" parameter
135	Zone Z35 „T" parameter
136	Zone Z36 „T" parameter
137	Zone Z37 „T" parameter
138	Zone Z38 „T" parameter
139	Zone Z39 „T" parameter
140	Zone Z40 „T" parameter
141	Zone Z41 „T" parameter
142	Zone Z42 „T" parameter
143	Zone Z43 „T" parameter
144	Zone Z44 „T" parameter
145	Zone Z45 „T" parameter
146	Zone Z46 „T" parameter
147	Zone Z47 „T" parameter
148	Zone Z48 „T" parameter
149	Zone Z49 „T" parameter
150	Zone Z50 „T" parameter
151	Zone Z51 „T" parameter
152	Zone Z52 „T" parameter
153	Zone Z53 „T" parameter
154	Zone Z54 „T" parameter
155	Zone Z55 „T" parameter
156	Zone Z56 „T" parameter
157	Zone Z57 „T" parameter
158	Zone Z58 „T" parameter
159	Zone Z59 „T" parameter
160	Zone Z60 „T" parameter
161	Zone Z61 „T" parameter
162	Zone Z62 „T" parameter
163	Zone Z63 „T" parameter
164	Zone Z64 „T" parameter

Manufacturer-programmed time for zone Z1: 20 seconds, zones Z2-Z64: 00 seconds.

5.7.5. PARAMETER "A": INPUT TRIGGERING CONDITIONS

Parameter A defines system's input operating modes and is described in detail in Chapter 5.3.1.1.

Address	Parameter
301	Zone Z1 „A" parameter
302	Zone Z2 „A" parameter
303	Zone Z3 „A" parameter
304	Zone Z4 „A" parameter
305	Zone Z5 „A" parameter
306	Zone Z6 „A" parameter
307	Zone Z7 „A" parameter
308	Zone Z8 „A" parameter
309	Zone Z9 „A" parameter
310	Zone Z10 „A" parameter
311	Zone Z11 „A" parameter
312	Zone Z12 „A" parameter
313	Zone Z13 „A" parameter
314	Zone Z14 „A" parameter
315	Zone Z15 „A" parameter
316	Zone Z16 „A" parameter
317	Zone Z17 „A" parameter
318	Zone Z18 „A" parameter
319	Zone Z19 „A" parameter
320	Zone Z20 „A" parameter
321	Zone Z21 „A" parameter
322	Zone Z22 „A" parameter
323	Zone Z23 „A" parameter
324	Zone Z24 „A" parameter
325	Zone Z25 „A" parameter
326	Zone Z26 „A" parameter
327	Zone Z27 „A" parameter
328	Zone Z28 „A" parameter
329	Zone Z29 „A" parameter
330	Zone Z30 „A" parameter
331	Zone Z31 „A" parameter
332	Zone Z32 „A" parameter

Address	Parameter
333	Zone Z33 „A" parameter
334	Zone Z34 „A" parameter
335	Zone Z35 „A" parameter
336	Zone Z36 „A" parameter
337	Zone Z37 „A" parameter
338	Zone Z38 „A" parameter
339	Zone Z39 „A" parameter
340	Zone Z40 „A" parameter
341	Zone Z41 „A" parameter
342	Zone Z42 „A" parameter
343	Zone Z43 „A" parameter
344	Zone Z44 „A" parameter
345	Zone Z45 „A" parameter
346	Zone Z46 „A" parameter
347	Zone Z47 „A" parameter
348	Zone Z48 „A" parameter
349	Zone Z49 „A" parameter
350	Zone Z50 „A" parameter
351	Zone Z51 „A" parameter
352	Zone Z52 „A" parameter
353	Zone Z53 „A" parameter
354	Zone Z54 „A" parameter
355	Zone Z55 „A" parameter
356	Zone Z56 „A" parameter
357	Zone Z57 „A" parameter
358	Zone Z58 „A" parameter
359	Zone Z59 „A" parameter
360	Zone Z60 „A" parameter
361	Zone Z61 „A" parameter
362	Zone Z62 „A" parameter
363	Zone Z63 „A" parameter
364	Zone Z64 „A" parameter

Manufacturer-programmed values for zones Z1-Z16: 30, Z17-Z64: 00.

5.7.6. PARAMETER "M": SYSTEM STATE AFTER ZONE TRIGGERING

Parameter M defines system response to the violation of alarm zone and which users are informed if certain zone sensors are triggered. It is described in detail in Chapter 5.3.1.2.

Address	Parameter
401	Zone Z1 „M" parameter
402	Zone Z2 „M" parameter
403	Zone Z3 „M" parameter
404	Zone Z4 „M" parameter
405	Zone Z5 „M" parameter
406	Zone Z6 „M" parameter
407	Zone Z7 „M" parameter
408	Zone Z8 „M" parameter
409	Zone Z9 „M" parameter
410	Zone Z10 „M" parameter
411	Zone Z11 „M" parameter
412	Zone Z12 „M" parameter
413	Zone Z13 „M" parameter
414	Zone Z14 „M" parameter
415	Zone Z15 „M" parameter
416	Zone Z16 „M" parameter
417	Zone Z17 „M" parameter
418	Zone Z18 „M" parameter
419	Zone Z19 „M" parameter
420	Zone Z20 „M" parameter
421	Zone Z21 „M" parameter
422	Zone Z22 „M" parameter
423	Zone Z23 „M" parameter
424	Zone Z24 „M" parameter
425	Zone Z25 „M" parameter
426	Zone Z26 „M" parameter
427	Zone Z27 „M" parameter
428	Zone Z28 „M" parameter
429	Zone Z29 „M" parameter
430	Zone Z30 „M" parameter
431	Zone Z31 „M" parameter
432	Zone Z32 „M" parameter

Address	Parameter
433	Zone Z33 „M" parameter
434	Zone Z34 „M" parameter
435	Zone Z35 „M" parameter
436	Zone Z36 „M" parameter
437	Zone Z37 „M" parameter
438	Zone Z38 „M" parameter
439	Zone Z39 „M" parameter
440	Zone Z40 „M" parameter
441	Zone Z41 „M" parameter
442	Zone Z42 „M" parameter
443	Zone Z43 „M" parameter
444	Zone Z44 „M" parameter
445	Zone Z45 „M" parameter
446	Zone Z46 „M" parameter
447	Zone Z47 „M" parameter
448	Zone Z48 „M" parameter
449	Zone Z49 „M" parameter
450	Zone Z50 „M" parameter
451	Zone Z51 „M" parameter
452	Zone Z52 „M" parameter
453	Zone Z53 „M" parameter
454	Zone Z54 „M" parameter
455	Zone Z55 „M" parameter
456	Zone Z56 „M" parameter
457	Zone Z57 „M" parameter
458	Zone Z58 „M" parameter
459	Zone Z59 „M" parameter
460	Zone Z60 „M" parameter
461	Zone Z61 „M" parameter
462	Zone Z62 „M" parameter
463	Zone Z63 „M" parameter
464	Zone Z64 „M" parameter

Manufacturer-programmed values for all zones: 70

5.7.7. PARAMETER "P": PARTITION ASSIGNMENT AND PARTIAL ARM METHODS. TAMPER DETECTION MODE.

This parameter is defining if zone is operating in full or partial arming mode and also if tamper detection mode is enabled. Possible operating modes are described in detail in Chapter 5.3.1.3..

Address	Parameter
501	Zone Z1 „P" parameter
502	Zone Z2 „P" parameter
503	Zone Z3 „P" parameter
504	Zone Z4 „P" parameter
505	Zone Z5 „P" parameter
506	Zone Z6 „P" parameter
507	Zone Z7 „P" parameter
508	Zone Z8 „P" parameter
509	Zone Z9 „P" parameter
510	Zone Z10 „P" parameter
511	Zone Z11 „P" parameter
512	Zone Z12 „P" parameter
513	Zone Z13 „P" parameter
514	Zone Z14 „P" parameter
515	Zone Z15 „P" parameter
516	Zone Z16 „P" parameter
517	Zone Z17 „P" parameter
518	Zone Z18 „P" parameter
519	Zone Z19 „P" parameter
520	Zone Z20 „P" parameter
521	Zone Z21 „P" parameter
522	Zone Z22 „P" parameter
523	Zone Z23 „P" parameter
524	Zone Z24 „P" parameter
525	Zone Z25 „P" parameter
526	Zone Z26 „P" parameter
527	Zone Z27 „P" parameter
528	Zone Z28 „P" parameter
529	Zone Z29 „P" parameter
530	Zone Z30 „P" parameter
531	Zone Z31 „P" parameter
532	Zone Z32 „P" parameter

Address	Parameter
533	Zone Z33 „P" parameter
534	Zone Z34 „P" parameter
535	Zone Z35 „P" parameter
536	Zone Z36 „P" parameter
537	Zone Z37 „P" parameter
538	Zone Z38 „P" parameter
539	Zone Z39 „P" parameter
540	Zone Z40 „P" parameter
541	Zone Z41 „P" parameter
542	Zone Z42 „P" parameter
543	Zone Z43 „P" parameter
544	Zone Z44 „P" parameter
545	Zone Z45 „P" parameter
546	Zone Z46 „P" parameter
547	Zone Z47 „P" parameter
548	Zone Z48 „P" parameter
549	Zone Z49 „P" parameter
550	Zone Z50 „P" parameter
551	Zone Z51 „P" parameter
552	Zone Z52 „P" parameter
553	Zone Z53 „P" parameter
554	Zone Z54 „P" parameter
555	Zone Z55 „P" parameter
556	Zone Z56 „P" parameter
557	Zone Z57 „P" parameter
558	Zone Z58 „P" parameter
559	Zone Z59 „P" parameter
560	Zone Z60 „P" parameter
561	Zone Z61 „P" parameter
562	Zone Z62 „P" parameter
563	Zone Z63 „P" parameter
564	Zone Z64 „P" parameter

Default values for all zones programmed by manufacturer: 10.

5.7.8. PARAMETER "I": PULSE COUNTING MODE OR TEMPERATURE HYSTERESIS

If the first digit of this parameter is larger than 1, the zone operates in the pulse counting mode. After triggering of a zone the number of times Ni during the preset time Ti, the system switches over to the alarm state. The first digit: the number of triggering events Ni. The second digit: the pulse counting time Ti. Multiplication of the second number by 10 produces the time in seconds. Minimal time: 10 seconds (1), maximal time: 90 seconds (9). If Ni=0 or Ni=1, the pulse counting mode is switched off.

In temperature measuring mode this parameter comply temperature difference, at which triggered zone returns to primary state.

Address	Parameter
601	Zone Z1 „I" parameter
602	Zone Z2 „I" parameter
603	Zone Z3 „I" parameter
604	Zone Z4 „I" parameter
605	Zone Z5 „I" parameter
606	Zone Z6 „I" parameter
607	Zone Z7 „I" parameter
608	Zone Z8 „I" parameter
609	Zone Z9 „I" parameter
610	Zone Z10 „I" parameter
611	Zone Z11 „I" parameter
612	Zone Z12 „I" parameter
613	Zone Z13 „I" parameter
614	Zone Z14 „I" parameter
615	Zone Z15 „I" parameter
616	Zone Z16 „I" parameter
617	Zone Z17 „I" parameter
618	Zone Z18 „I" parameter
619	Zone Z19 „I" parameter
620	Zone Z20 „I" parameter
621	Zone Z21 „I" parameter
622	Zone Z22 „I" parameter
623	Zone Z23 „I" parameter
624	Zone Z24 „I" parameter
625	Zone Z25 „I" parameter
626	Zone Z26 „I" parameter
627	Zone Z27 „I" parameter
628	Zone Z28 „I" parameter
629	Zone Z29 „I" parameter
630	Zone Z30 „I" parameter
631	Zone Z31 „I" parameter
632	Zone Z32 „I" parameter

Address	Parameter
633	Zone Z33 „I" parameter
634	Zone Z34 „I" parameter
635	Zone Z35 „I" parameter
636	Zone Z36 „I" parameter
637	Zone Z37 „I" parameter
638	Zone Z38 „I" parameter
639	Zone Z39 „I" parameter
640	Zone Z40 „I" parameter
641	Zone Z41 „I" parameter
642	Zone Z42 „I" parameter
643	Zone Z43 „I" parameter
644	Zone Z44 „I" parameter
645	Zone Z45 „I" parameter
646	Zone Z46 „I" parameter
647	Zone Z47 „I" parameter
648	Zone Z48 „I" parameter
649	Zone Z49 „I" parameter
650	Zone Z50 „I" parameter
651	Zone Z51 „I" parameter
652	Zone Z52 „I" parameter
653	Zone Z53 „I" parameter
654	Zone Z54 „I" parameter
655	Zone Z55 „I" parameter
656	Zone Z56 „I" parameter
657	Zone Z57 „I" parameter
658	Zone Z58 „I" parameter
659	Zone Z59 „I" parameter
660	Zone Z60 „I" parameter
661	Zone Z61 „I" parameter
662	Zone Z62 „I" parameter
663	Zone Z63 „I" parameter
664	Zone Z64 „I" parameter

The factory default values for all zones: 02.

5.7.9. ZONE RESPONSE TIME

This parameter indicates the duration of presence of a constant signal at the input that is required for the system to register an alteration of the zone status. The system becomes increasingly resistant to interference with increase of this time. The set time should be multiplied by 100 to obtain the time in milliseconds. The range of possible values: 01-99 x100 ms (0.1 s – 9.9 s).

Address	Parameter
201	Response time of zone Z1
202	Response time of zone Z2
203	Response time of zone Z3
204	Response time of zone Z4
205	Response time of zone Z5
206	Response time of zone Z6
207	Response time of zone Z7
208	Response time of zone Z8
209	Response time of zone Z9
210	Response time of zone Z10
211	Response time of zone Z11
212	Response time of zone Z12
213	Response time of zone Z13
214	Response time of zone Z14
215	Response time of zone Z15
216	Response time of zone Z16
217	Response time of zone Z17
218	Response time of zone Z18
219	Response time of zone Z19
220	Response time of zone Z20
221	Response time of zone Z21
222	Response time of zone Z22
223	Response time of zone Z23
224	Response time of zone Z24
225	Response time of zone Z25
226	Response time of zone Z26
227	Response time of zone Z27
228	Response time of zone Z28
229	Response time of zone Z29
230	Response time of zone Z30
231	Response time of zone Z31
232	Response time of zone Z32

Address	Parameter
233	Response time of zone Z33
234	Response time of zone Z34
235	Response time of zone Z35
236	Response time of zone Z36
237	Response time of zone Z37
238	Response time of zone Z38
239	Zone Z39 quick-acting
240	Zone Z40 quick-acting
241	Zone Z41 quick-acting
242	Zone Z42 quick-acting
243	Zone Z43 quick-acting
244	Zone Z44 quick-acting
245	Zone Z45 quick-acting
246	Zone Z46 quick-acting
247	Zone Z47 quick-acting
248	Zone Z48 quick-acting
249	Zone Z49 quick-acting
250	Zone Z50 quick-acting
251	Zone Z51 quick-acting
252	Zone Z52 quick-acting
253	Zone Z53 quick-acting
254	Zone Z54 quick-acting
255	Zone Z55 quick-acting
256	Zone Z56 quick-acting
257	Zone Z57 quick-acting
258	Zone Z58 quick-acting
259	Zone Z59 quick-acting
260	Zone Z60 quick-acting
261	Zone Z61 quick-acting
262	Zone Z62 quick-acting
263	Zone Z63 quick-acting
264	Zone Z64 quick-acting

The factory default values for all zones: 05 (500ms).

5.7.10. OPERATING TIME OF OUTPUTS C1-C4, BELL (C8)

Output operating time (if output operates in impulse mode). Possible values: 00-99.

Address	Parameter T
171	Operation time of output C1.
172	Operation time of output C2.
173	Operation time of output C3.
174	Operation time of output C4.
175	Operation time of output C5.
176	Operation time of output C6.
177	Operation time of output C7.
178	Operation time of output BELL (C8).

In siren mode operation time is in minutes, in all other modes in seconds or in minutes.

Manufacturer-programmed time: C1, C2, C6, C7- **00** sec., C3, C4, C5- **05** sec., C8- **02** min.

5.7.11. OPERATING MODE OF OUTPUTS C1-C7 and BELL (C8).

Possible operating modes are described in detail in Chapter 5.3.2.1.

Address	Parameter M
471	Operating mode of output C1.
472	Operating mode of output C2.
473	Operating mode of output C3.
474	Operating mode of output C4.
475	Operating mode of output C5.
476	Operating mode of output C6.
477	Operating mode of output C7.
478	Operating mode of output C8 (BELL).

Manufacturer-programmed output modes: C1, C2, C3- **01**, C4- **05**, C5- **81**, C6- **02**, C7- **80**, C8- **06**.

5.7.12. OUTPUTS C1-C8: INVERTED MODE AND OPERATING TIME UNITS.

Possible operating modes are described in detail in Chapter 5.3.2.2.

Address	Parameter V
481	Time units of output C1 and inversion.
482	Time units of output C2 and inversion.
473	Time units of output C3 and inversion.
474	Time units of output C4 and inversion.
475	Time units of output C5 and inversion.
476	Time units of output C6 and inversion.
477	Time units of output C7 and inversion.
478	Time units of output C8 (BELL) and inversion.

Manufacturer-programmed output modes: C1, C2, C3, C4, C6, C7,C8 - **00**, C5- **01**.

5.7.13. PARAMETER "E": THE WAY USER IS INFORMED ABOUT ARMING AND DISARMING

This parameter defines how the user is notified about arming or disarming of the alarm system. Parameter „E" is described in detail in Chapter 5.3.3.1.

Address	Parameter
465	System parameter „E".

Manufacturer-programmed value: 20.

5.7.14. PARAMETER "F": SYSTEM RESPONSE TO INCOMING CALLS AND NUMBER OF CALLS TO USER

Parameter „F" defines system response to incoming calls and number of calls to user in alarm state. It is described in detail in Chapter 5.3.3.2.

Address	Parameter
466	System parameter „F".

Manufacturer-programmed value: 31.

5.7.15. PARAMETER "G": DALAY TIME OF REPORT SMS IN CASE OF POWER SUPPLY FAILURE

Parameter "G" defines *delay time of report SMS in case of power supply failure (in minutes).* Possible values: 00-99 minutes. This parameter is described in Chapter 5.3.3.3 in more detail.

Address	Parameter
166	System parameter „G".

Manufacturer-programmed value: 01.

5.7.16. PARAMETER "H": DATA TRANSFER TO THE ALARM MONITORING STATION

This parameter is used for setting mode of data transfer to the alarm monitoring station. This parameter is described in Chapter 7.3 in more detail.

Address	Parameter
365	System parameter „H".

Manufacturer-programmed value: 00.

5.7.17. PARAMETER "J" – SYSTEM RESPONSE TO INTENTIONAL GSM JAMMING

Parameter „J" defines the system response to intentional GSM jamming.

Address	Param. value	Explanation of operation
370	00	GSM JAMMING detection is off
370	01	An SMS message is sent to users after resuming of communication.
370	02	Detection of GSM Jamming signal activates the siren .
370	03	Operates as the functions 01 and 02.

Manufacturer-programmed value: 01.

5.7.18. PARAMETER "L": SMS STRUCTURE AND SMS PASSWORD FUNCTIONALITY

This parameter is designated for configuration of SMS messages. This parameter is described in Chapter 5.3.3.4 in more detail

Address	Parameter
369	System parameter „L".

Manufacturer-programmed value: 32.

5.7.19. PARAMETER "P": DIVIDING INTO PARTITIONS. 24 HOUR TAMPER DETECTION MODE.

This parameter is described in Chapter 5.3.3.5 in more detail

Address	Parameter
368	System parameter „P".

Manufacturer-programmed value: 00.

5.7.20. ACCESS CODE LENGTH (4 OR 6 DIGITS)

Address	Param. value	Explanation of operation
366	04	Four digit user access code
366	06	Six digit user access code

Manufacturer-programmed value: 04.

5.7.21. EXIT DELAY AUDIBLE INDICATION

When a close code is entered, delay time count can be indicated by short keypad beeps, repeating each second.

Address	Param. value	Explanation of operation
367	00	Audible indication OFF
367	01	Audible indication ON

Manufacturer-programmed value: 01.

5.7.22. ASSIGNING KEYPAD ZONES

Paradox keypads have zone inputs to which devices such as door contacts can be connected. (See Ch. 4.2.1 for wiring information). Once the keypad zones are installed, assign the zone number to keypad zone:

- Press the [**ENTER**] key
- Enter your system installer code
- Press and hold the ⏻ key until 3 short beeps are heard (lights **ARM** and **STAY** are on constantly).

If K10V or K10H keypad is used, keypad zone is assigned after pressing corresponding key (from 1 to 10). Turned on key is showing the zone that is assigned. Zone assigning is confirmed by pressing **[ENTER]** key. Keypad zone can be deleted by pressing the **[CLEAR]** key.

If K32 or K32LCD keypad is used, keypad zone is selected by pressing two digits. For example, if you want to assign zone 16 to the keypad zone, press 1 and 6. If you want to assign zone 3, press 0 and 3. Keypad zone is deleted by pressing [**CLEAR**] and [**ENTER**] keys.

Important! *Use of partitions Z17 ... Z32 for the keypad partition is recommended to efficiently use partition inputs. After assigning zone to the keypad, the corresponding input zone won't be operating on the GsmAlarm-600 board.*

5.7.23. SETTING SYSTEM CLOCK

To set system clock and date:

- Press the **[TBL]** button. **[TBL]** will flash.
- Press the **[8]** button. **[TBL]** and **[ARM]** will flash. K32LCD keypad screen will show "Time".
- Enter time in following format: HHMM. HH – hours, MM – minutes. For example, if time 12 hours 45 minutes must be programmed, enter 1245. After entering time, four short beeps are heard and date programming mode is turned on automatically (ARM LED turns on constantly, the K32LCD keypad display reads "Date").
- Enter date in following format: YYYYMMDD. YYYY: year, MM: month, DD: day. For example, if you have to program date: year 2014, 01 month, 23 day, enter 20140123. After entering date four short beeps are heard.
- Exit the programming mode by pressing the key **[CLEAR]**.

In case of keypad TM50, time programming is activated by selecting the menu items: Menu -> Settings -> Home page -> Set Time / Date.

5.7.24. PROGRAMMING 24 HOUR TIMER

User is able to program up to 20 independent timer events. Each event is definable with event number, instruction and event time. Address, given in the table bellow, indicates event number. Event instruction indicates function to be performed in programmed time (e.g. SMS message to be sent, related output activated/ deactivated etc.). Event commands are described in Chapter 5.3.5.1.

To program the timer:

- Press the [**ENTER**] key.
- Enter your system installer code. The lights **ARM** and **STAY** will flash.
- Enter 3-digit address, indicating event number. The lights **ARM** and **STAY** will lit constantly.

- Enter 6-digit event instruction and event time. First two digits – event instruction; where following four – timer activation time. E.g.: for output C2 to be activated at 12:15, begin entering address *401* (event TMR01), then enter *22 12 15* (22 – output C2 activation code, 12 15 – activation time).

Address	Event Number
701	TMR01
702	TMR02
703	TMR03
704	TMR04
705	TMR05
706	TMR06
707	TMR07
708	TMR08
709	TMR09
710	TMR10

Address	Event Number
711	TMR11
712	TMR12
713	TMR13
714	TMR14
715	TMR15
716	TMR16
717	TMR17
718	TMR18
719	TMR19
720	TMR20

5.7.25. PROGRAMMING CONTACT ID USER ACCOUNT NUMBER

Four digit user account number is provided by security service that protects object. This parameter is described in Chapter 7 in more detail.

Address	User ID
021	0000 - 9999

Manufacturer-programmed Contact ID user account number: 0000.

In six digit mode, the first four digits correspond to the identification number. The last two digits are insignificant. Two zeros can be entered when programming.

5.7.26. TEMPERATURE CORRECTION

In most cases, an additional temperature correction is not necessary, but using several thermometers attached by cables of different lengths, indications may be slightly different because of cable resistance. Temperature measured on each zone can be adjusted by changing the address [171] (zone Z1) - [176] (zone Z6) parameter. Zero correction matches number 20. Increasing this number, the temperature value increases, by reducing – the temperature value decreases. Correction step: 0.3 ºC.

5.7.27. THE WAY USER IS INFORMED ABOUT STAY OR SLEEP MODE ACTIVATION

Address	Parameter value	Purpose
467	00	After turning on STAY or SLEEP mode, user is informed by short call or (and) SMS message .
467	01	After turning on STAY or SLEEP mode, user is not informed .

Manufacturer-programmed value: 00.

5.7.28. THE WAY USER IS INFORMED ABOUT STAY OR SLEEP MODE DEACTIVATION

Address	Parameter value	Purpose
468	00	After turning off STAY or SLEEP mode, user is informed by short call or (and) SMS message .
468	01	After turning off STAY or SLEEP mode, user is not informed .

Manufacturer-programmed value: 00.

5.7.29. KEYPAD INDICATOR STAYD

Address	Parameter value	Purpose
372	00	StayD indication is on.
372	01	StayD indication is off.

Manufacturer-programmed value: 00.

In case of keypad TM50, we recommend to deactivate StayD indication.

5.8. PROGRAMMING IBUTTON KEYS

It is recommended to execute programming and setup of iButton keys via a computer using the GSM alarm configuration tool GAPROG. The computer allows programming, deletion, and assigning of iButton keys to a specific user or programmable output, and setting up of key control functions. The GSM alarm configuration tool is downloadable from the website of the manufacturer: www.eltech.lt

Without a computer, only programming of new keys is possible. Deletion and setup of programmed keys is impossible. The key programming mode is activated by the DTMF/SMS command 71# (see Ch. 15). The key programming mode is indicated by a rapid blinking of the MODE indicator. In the programming mode, a key is attached to the reader for 2-3 seconds. Completion of the key code capture is confirmed by a very rapid blinking of the MODE indicator. After programming of all keys, the key programming mode should be deactivated. It may be done by the DTMF/SMS command 70# or by switching off and on the system power supply.

5.9. PROGRAMMING AND DIAGNOSTICS OVER THE INTERNET

The system parameters may be changed and the system status may be observed by connecting over the internet. The data are transmitted according to TCP/IP protocol; the GSM module connects to the internet via a GPRS cannel. The connection is established by the GSM alarm configuration tool GAPROG. The application is downloadable from the website of the manufacturer at www.eltech.lt.

Two conditions are necessary for connection over the internet.

The first condition: GPRS service should be activated for the SIM card of the GSM module. Usually, GPRS service is activated automatically. You may contact your GSM service provider to inquire about activation of the GPRS service.

The second condition: The GSM module or the computer that is used for connection to the GSM module should have unique IP addresses. A unique IP address also is called a real address or an external address. An external IP address is accessible from any internet-connected computer. An IP address is automatically provided to the GSM module by the GSM network. Inquire your GSM service provider to find out, if your SIM card has a unique IP address. Inquire your ISP to find out, if your computer has a unique IP address.

Before connecting to the module, it is recommended to verify access point settings. Send the following SMS message to GsmAlarm-600:

A	A	A	A	A	A	A	A		A	P	N

or

A	P	N

(if SMS password is deactivated)

The massage returned to the user by GsmAlarm-600 contains the access point name, the login name and the login password:

AAAAAAAA APN:internet.tele2.lt, APLOG:wap, APPASS:wap,

Adjust the access point name, the login name and the login password as required. In Lithuanian networks OMNITEL and BITE GSM, all fields may be blank (comma after colon). The access point name of TELE2 network is *internet.tele2.lt* , other field may be blank. The SMS message with adjustments is sent back to the GsmAlarm-600 module.

There are two ways to connect to a GsmAlarm-600 module over the internet.

The first method: the user connects to the GSM module (the module operates as a server). This method is possible only if the GSM network has assigned an unique IP address to the module. The user sends an SMS message to the GSM module:

A	A	A	A	A	A	A	A		G	E	T	I	P	A

or

G	E	T	I	P	A

(if *SMS password is deactivated)*

The GETIPA command activates the GPRS interface of the GSM module and the "server" mode. The GSM module sends connection data to the user: the IP address and the port number. The user should mark the option "*Connect to GSM module*" in the window "*Connect over GPRS*", enter the IP address and the port number, click the button "C*onnect*", and wait for establishment of connection.

The second method: the GSM module connects to the computer of the user (the module operates as a client). This method is possible only if a real (unique) IP address has been assigned to the computer of the user. The user sends an SMS message to the GSM module, containing the command CONNECT and the IP address of the user computer:

A	A	A	A	A	A	A	A	C	O	N	N	E	C	T	2	1	3	.	1	3	0	.	3	2	.	5	5

or

C	O	N	N	E	C	T	2	1	3	.	1	3	0	.	3	2	.	5	5

The *CONNECT* command activates the GPRS interface of the GSM module and the "client" mode. The GSM module sends an SMS message to the user, containing the computer IP address and the connection port number. The user should mark the option "*Wait for connection by GSM module*" in the window "*Connect over GPRS*", enter the port number, click the button "*Wait*", and wait for the GSM module to connect to the computer. The GSM module retries connecting to the specified IP address every 30 seconds.

The computer IP address that was included in the SMS message from the user is automatically saved in the GsmAlarm-600 memory. Later, the command CONNECT is sufficient to make the GSM module to connect to the same IP address:

A	A	A	A	A	A	A	A	C	O	N	N	E	C	T

or

C	O	N	N	E	C	T

Important! GPRS parameters of the GSM module should be correctly set up for GPRS interface to operate. The GPRS parameters are configured via USB interface using GAPROG software. The setup procedure is described in the manual of GAPROG software.

6. RESETTING SYSTEM SETTINGS TO FACTORY DEFAULTS

In order to reset all system parameters to factory default settings, press and hold the RESET button for five seconds. The "MODE" LED will start flashing. Within 2 seconds of this flashing, press the reset switch again. The panel will reset to default and restart, parameters will be reset to the values indicated in Ch. 6.1.

Only the parameters stored in the internal memory module system can be restored using this method. User umbers stored in SIM card will not be erased.

6.1. MANUFACTURER PROGRAMMED PARAMETERS

Input parameters											
Zone	Name	[Addr.]	Pr.*A*	[Addr.]	Pr. *M*	[Addr.]	Pr.*P*	[Addr.]	Pr.I	[Addr.]	Pr.T
Z1	*Zone1*	[301]	*A30*	[401]	*M70*	[501]	*P10*	[601]	*I02*	[101]	*T20*
Z2	*Zone2*	[302]	*A30*	[402]	*M70*	[502]	*P10*	[602]	*I02*	[102]	*T00*
Z3	*Zone3*	[303]	*A30*	[403]	*M70*	[503]	*P10*	[603]	*I02*	[103]	*T00*
Z4	*Zone4*	[304]	*A30*	[404]	*M70*	[504]	*P10*	[604]	*I02*	[104]	*T00*
Z5	*Zone5*	[305]	*A30*	[405]	*M70*	[505]	*P10*	[605]	*I02*	[105]	*T00*
Z6	*Zone6*	[306]	*A30*	[406]	*M70*	[506]	*P10*	[606]	*I02*	[106]	*T00*
Z7	*Zone7*	[307]	*A30*	[407]	*M70*	[507]	*P10*	[607]	*I02*	[107]	*T00*
Z8	*Zone8*	[308]	*A30*	[408]	*M70*	[508]	*P10*	[608]	*I02*	[108]	*T00*
Z9	*Zone9*	[309]	*A30*	[409]	*M70*	[509]	*P10*	[609]	*I02*	[109]	*T00*
Z10	*Zone10*	[310]	*A30*	[410]	*M70*	[510]	*P10*	[610]	*I02*	[110]	*T00*
Z11	*Zone11*	[311]	*A30*	[411]	*M70*	[511]	*P10*	[611]	*I02*	[111]	*T00*
Z12	*Zone12*	[312]	*A30*	[412]	*M70*	[512]	*P10*	[612]	*I02*	[112]	*T00*
Z13	*Zone13*	[313]	*A30*	[413]	*M70*	[513]	*P10*	[613]	*I02*	[113]	*T00*
Z14	*Zone14*	[314]	*A30*	[414]	*M70*	[514]	*P10*	[614]	*I02*	[114]	*T00*
Z15	*Zone15*	[315]	*A30*	[415]	*M70*	[515]	*P10*	[615]	*I02*	[115]	*T00*
Z16	*Zone16*	[316]	*A00*	[416]	*M70*	[516]	*P10*	[616]	*I02*	[116]	*T00*
Z17	*Zone17*	[317]	*A00*	[417]	*M70*	[517]	*P10*	[617]	*I02*	[117]	*T00*
Z18	*Zone18*	[318]	*A00*	[418]	*M70*	[518]	*P10*	[618]	*I02*	[118]	*T00*
Z19	*Zone19*	[319]	*A00*	[419]	*M70*	[519]	*P10*	[619]	*I02*	[119]	*T00*
Z20	*Zone20*	[320]	*A00*	[420]	*M70*	[520]	*P10*	[620]	*I02*	[120]	*T00*
Z21	*Zone21*	[321]	*A00*	[421]	*M70*	[521]	*P10*	[621]	*I02*	[121]	*T00*
Z22	*Zone22*	[322]	*A00*	[422]	*M70*	[522]	*P10*	[622]	*I02*	[122]	*T00*
Z23	*Zone23*	[323]	*A00*	[423]	*M70*	[523]	*P10*	[623]	*I02*	[123]	*T00*
Z24	*Zone24*	[324]	*A00*	[424]	*M70*	[524]	*P10*	[624]	*I02*	[124]	*T00*
Z25	*Zone25*	[325]	*A00*	[425]	*M70*	[525]	*P10*	[625]	*I02*	[125]	*T00*
Z26	*Zone26*	[326]	*A00*	[426]	*M70*	[526]	*P10*	[626]	*I02*	[126]	*T00*
Z27	*Zone27*	[327]	*A00*	[427]	*M70*	[527]	*P10*	[627]	*I02*	[127]	*T00*
Z28	*Zone28*	[328]	*A00*	[428]	*M70*	[528]	*P10*	[628]	*I02*	[128]	*T00*
Z29	*Zone29*	[329]	*A00*	[429]	*M70*	[529]	*P10*	[629]	*I02*	[129]	*T00*
Z30	*Zone30*	[330]	*A00*	[430]	*M70*	[530]	*P10*	[630]	*I02*	[130]	*T00*
Z31	*Zone31*	[331]	*A00*	[431]	*M70*	[531]	*P10*	[631]	*I02*	[131]	*T00*
Z32	*Zone32*	[332]	*A00*	[432]	*M70*	[532]	*P10*	[632]	*I02*	[132]	*T00*
Z33	*Zone33*	[333]	*A00*	[433]	*M70*	[533]	*P10*	[633]	*I02*	[133]	*T00*
Z34	*Zone34*	[334]	*A00*	[434]	*M70*	[534]	*P10*	[634]	*I02*	[134]	*T00*
Z35	*Zone35*	[335]	*A00*	[435]	*M70*	[535]	*P10*	[635]	*I02*	[135]	*T00*
Z36	*Zone36*	[336]	*A00*	[426]	*M70*	[536]	*P10*	[636]	*I02*	[136]	*T00*

Z37	*Zone37*	[337]	*A00*	[427]	*M70*	[537]	*P10*	[637]	*I02*	[137]	*T00*
Z38	*Zone38*	[338]	*A00*	[428]	*M70*	[538]	*P10*	[638]	*I02*	[138]	*T00*
Z39	*Zone39*	[339]	*A00*	[429]	*M70*	[539]	*P10*	[639]	*I02*	[139]	*T00*
Z40	*Zone40*	[340]	*A00*	[440]	*M70*	[540]	*P10*	[640]	*I02*	[140]	*T00*
Z41	*Zone41*	[341]	*A00*	[441]	*M70*	[541]	*P10*	[641]	*I02*	[141]	*T00*
Z42	*Zone42*	[342]	*A00*	[442]	*M70*	[542]	*P10*	[642]	*I02*	[142]	*T00*
Z43	*Zone43*	[343]	*A00*	[443]	*M70*	[543]	*P10*	[643]	*I02*	[143]	*T00*
Z44	*Zone44*	[344]	*A00*	[444]	*M70*	[544]	*P10*	[644]	*I02*	[144]	*T00*
Z45	*Zone45*	[345]	*A00*	[445]	*M70*	[545]	*P10*	[645]	*I02*	[145]	*T00*
Z46	*Zone46*	[346]	*A00*	[446]	*M70*	[546]	*P10*	[646]	*I02*	[146]	*T00*
Z47	*Zone47*	[347]	*A00*	[447]	*M70*	[547]	*P10*	[647]	*I02*	[147]	*T00*
Z48	*Zone48*	[348]	*A00*	[448]	*M70*	[548]	*P10*	[648]	*I02*	[148]	*T00*
Z49	*Zone49*	[349]	*A00*	[449]	*M70*	[549]	*P10*	[649]	*I02*	[149]	*T00*
Z50	*Zone50*	[350]	*A00*	[450]	*M70*	[550]	*P10*	[650]	*I02*	[150]	*T00*
Z51	*Zone51*	[351]	*A00*	[451]	*M70*	[551]	*P10*	[651]	*I02*	[151]	*T00*
Z52	*Zone52*	[352]	*A00*	[452]	*M70*	[552]	*P10*	[652]	*I02*	[152]	*T00*
Z53	*Zone53*	[353]	*A00*	[453]	*M70*	[553]	*P10*	[653]	*I02*	[153]	*T00*
Z54	*Zone54*	[354]	*A00*	[454]	*M70*	[554]	*P10*	[654]	*I02*	[154]	*T00*
Z55	*Zone55*	[355]	*A00*	[455]	*M70*	[555]	*P10*	[655]	*I02*	[155]	*T00*
Z56	*Zone56*	[356]	*A00*	[456]	*M70*	[556]	*P10*	[656]	*I02*	[156]	*T00*
Z57	*Zone57*	[357]	*A00*	[457]	*M70*	[557]	*P10*	[657]	*I02*	[157]	*T00*
Z58	*Zone58*	[358]	*A00*	[458]	*M70*	[558]	*P10*	[658]	*I02*	[158]	*T00*
Z59	*Zone59*	[359]	*A00*	[459]	*M70*	[559]	*P10*	[659]	*I02*	[159]	*T00*
Z60	*Zone60*	[360]	*A00*	[460]	*M70*	[560]	*P10*	[660]	*I02*	[160]	*T00*
Z61	*Zone61*	[361]	*A00*	[461]	*M70*	[561]	*P10*	[661]	*I02*	[161]	*T00*
Z62	*Zone62*	[362]	*A00*	[462]	*M70*	[562]	*P10*	[662]	*I02*	[162]	*T00*
Z63	*Zone63*	[363]	*A00*	[463]	*M70*	[563]	*P10*	[663]	*I02*	[163]	*T00*
Z64	*Zone64*	[364]	*A00*	[464]	*M70*	[564]	*P10*	[664]	*I02*	[164]	*T00*

Output parameters							
PGM Output	N a m e	[Addr.] Param. *M*		[Addr.] Operating time T		[Addr.] Invert.	
C1	*OutC1*	[471]	*M01*	[171]	*T00* (sec.)	[481]	No
C2	*OutC2*	[472]	*M01*	[172]	*T00* (sec.)	[482]	No
C3	*OutC3*	[473]	*M01*	[173]	*T05* (sec.)	[483]	No
C4	*OutC4*	[474]	*M05*	[174]	*T05* (sec.)	[484]	No
C5	*OutC5*	[475]	*M81*	[175]	*T05* (sec.)	[485]	Yes
C6	*OutC6*	[476]	*M02*	[176]	*T00* (sec.)	[486]	No
C7	*OutC7*	[477]	*M80*	[177]	*T00* (sec.)	[487]	No
BELL (C8)	*Siren*	[478]	*M06*	[178]	*T02* (min.)	[488]	No

Common system parameters									
SMS Password	*E* [465]	*F* [466]	*G* [166]	*H* [365]	*J* [370]	*K* [-]	*L* [369]	*P* [368]	*T* [100]
AAAAAAAA	*E20*	*F31*	*G01*	*H00*	*J01*	*K00*	*L32*	*P00*	*T20*

Administrator access code: 0000 (000000)
First user access code: 1234 (123456)

[**Addr.**] - parameter address when programming with the keypad.

7. DATA TRANSFER TO ALARM MONITORING STATION

User can choose object protection way:

- individual protection, when SMS messages and calls are addressed to user only;
- combined protection, when information about state of the object is received both by security service and user;
- protection by security service only.

Data is transferred to the alarm monitoring station by Standard CONTACT ID protocol, through GSM voice call; while Standard CONTACT ID protocol is understandable to all modern alarm monitoring stations. GsmAlarm-600 transfers data about violation and restoring of alarm zone, arming and disarming, power supply fault, malfunction of the backup battery, malfunction of the fire zone. Test messages can be sent on certain time.

In order to activate function of data transfer to the alarm monitoring service it is necessary to program one or two numbers of alarm monitoring station (see Ch. 7.1), to program four digit user account number (see Ch. 7.2) and choose appropriate protection mode (see Ch. 7.3).

7.1. PROGRAMMING TELEPHONE NUMBERS OF THE ALARM MONITORING STATION

Alarm monitoring station telephone number (numbers) is (are) provided by security service that protects particular object. Telephone numbers are programmed in the same way as user numbers (see Ch. 5.2.1 and 5.2.2). In most case one number CIDNR1 is sufficient. It is recommended to program with international code (+370...).

7.2. PROGRAMMING CONTACT ID USER ACCOUNT NUMBER

Four digit user account number is provided by security service that protects object. Programming can be performed with keypad (see Ch. 5.7.24) or with SMS message.

In order to program the account number, following SMS is sent:

A	A	A	A	A	A	A	A		C	I	D	A	C	C	:	1	2	3	4

AAAAAAAA - SMS password;
CIDACC: - programming command;
1234 - four digit user account number.

Important:
a) no characters or spaces can be used before the password;
b) no spaces are allowed before and after the colon;

If number programming command was performed successfully, the user receives SMS with programmed identification number.

In order to get programmed account number following SMS message is sent:

A	A	A	A	A	A	A	A		C	I	D	A	C	C

7.3. MODES OF DATA TRANSFER TO THE ALARM MONITORING STATION

Addr.:[233]

Modes of data transfer to the alarm monitoring station are determined by general system parameter H. H parameter can be programmed with SMS message (see Ch. 5.3.2) or with keypad (see Ch. 5.7.15). Possible values are presented in the table.

Information is received by users ALRNR1 - ALRNR5.	**H**XY		Information is received by alarm monitoring station
	X	Y	
Users doesn‘t get information about protected object.	0	0	Data transfer to alarm monitoring station is off.
Users are informed about all events with SMS messages.	1	1	Data about violation of protected zone, power supply fault, malfunction of the backup battery, malfunction of the fire zone, is transferred. Periodical test signal can be sent.*
-	-	2	All above-mentioned data is transferred plus information about arming and disarming.

***** In order that GsmAlarm-600 would send test message to the alarm monitoring station once per day, it is necessary to set system clock (see Ch. 5.3.4) and program 24 hour timer (see Ch. 5.3.5).

If data transfer mode is on (Y value is above zero), all calls are addressed to alarm monitoring station only, i.e. GsmAlarm-600 users ALRNR1-ALRNR5 don‘t get calls (without reference to programmed M parameter value, see Ch. 5.3.1.2). In this case short call function is on only (GsmAlarm-600 responds to user call with short call and can inform user about arming and disarming with short call).

If H value is H01 or H02, object is protected by security service only, i.e. users ALRNR1-ALRNR5 will not get information about trespass, disconnection of the main power supply, arming and disarming. User can receive information about the object only after sending appropriate SMS message or after calling to GsmAlarm-600 number and entering appropriate DTMF code.

If H value is H11 or H12, GsmAlarm-600 is operating in “combined protection” mode and firstly calls and transfers information to the alarm monitoring station, and afterwards is proceeding in standard algorithm and informs users about event with SMS message:

Unable to connect to the alarm monitoring station

7.4. CONTACT ID PROTOCOL CODES

GsmAlarm-600 for data transfer is using following standard CONTACT ID protocol event codes. It is impossible to change codes or program new codes.

CID code	Transferred information
100	Panic alarm: silent alarm.
110	Activation or restoring fire alarm sensor.
120	Panic alarm.
130	Activation or restoring protected zone.
133	24 Activation or restoring 24 hour zone.
301	Disconnection or reconnection of the main power supply.
302	Malfunction or elimination of the problem of the backup battery.
373	Malfunction or elimination of the problem of the fire zone circuit.
401	Arming or disarming with a keypad.
403	Arming or disarming with a command of 24 hour timer.
407	Remote arming or disarming (with user's mobile phone) of the alarm system.
456	Partial arming (when the „force“ zone is opened).
602	Test message.

8. VOICE MESSAGES, PREPARATION OF MICRO SD CARD

GsmAlarm-600 can notify by a voice message about the tripped zones and the system status. If the system is set to call on alarm activation, the user after picking the call shall hear messages about tripped zones (the zone name, number of trips, and the temperature) and the system status (protection enables/disabled).

The voice message function requires presence of a MicroSD card. Any MicroSD card of 1 GB, 2 GB, 4 GB or 8 GB capacity may be used. If the card was purchased together with GsmAlarm-600, no additional system configuration is required.

The new memory card must be formatted to FAT16 or FAT32 file system and the directory "Voice" must be uploaded into it. The card can be formatted by inserting it into a computer (via an adapter) or by inserting the card into GsmAlarm-600 SD card slot and connecting GsmAlarm-600 to a computer via an USB cable. The voice message directory can be found on the manufacturer website at www.eltech.lt. The file name: **sd_voice_600.zip**. Unzip the file before uploading it to the SD card.

The directory ***/Voice/Default_EN*** contains voice messages recorded by the manufacturer. User generated voice files can be placed in the directory ***/Voice/User***. When reading messages, GsmAlarm-600 seeks the directory /User first. If the file is absent, the message from the directory /Default_EN is read. Voice messages can be recorded on a computer, e.g., using the free application "Audacity" (http://audacity.sourceforge.net/). Voice messages should be saved in **.wav** format (sample rate: **8 kHz**, sample format: **16 bites**, mode: **mono**). Differently formatted files will not be played. Files names must match the names of files in the directory /Voice/Default_EN.

Voice messages can be recorded by calling to GsmAlarm-600 unit after activation of voice record mode by DTMF command #*#* and following voice instructions. You will be prompted to enter three digit number before saving or deleting a voice message. This number indicates the purpose of the recorded/to be deleted message. Numbers 001 ... 064 correspond the zone numbers. For example, if you recorded the name of the first zone, enter 001; if you recorded the name of the twenty fifth zone, enter 025. Numbers of voice messages that can be recorded by the user are listed in the table below.

Number	Purpose	File name
001 ... 064	Zone name	zone_1 ... zone_64
200	Message after pick up (e.g. GSM protection system)	intro.wav
201	First partition name	partition_1.wav
202	Second partition name	partition_2.wav
203	Information message for the user (e.g. how to enable the microphone).	user_info.wav

9. SYSTEM CONTROL USING THE KEYPAD

The keypad allows you to easily access your security system's functions and provide you with an easy-to-understand display of your security system's alarm and operational status. Keypad includes colored lights which convey the current status of your system. The state of each light represents a specific condition in your system.

9.1. KEYPAD KEYS AND LED FUNCTIONALITY

9.1.1. [⏻] *KEY* – EXTENDED INDICATION MODE

Key ⏻ can be used for indication of Z11 - Z15 zones, if K636, K10V or K10H keypad is used. In the main indication mode keypad keys [**1**] – [**10**] are alight if zone, corresponding alight number, is open. For example, if Z1 zone is open, key [**1**] is alight. If Z10 zone is open, key [**10**] is alight. If key ⏻ is alight constantly it shows that there are open zones in the group Z11 - Z15. After pressing ⏻, extended indication mode is turned on (⏻ is flashing). In this case Z11 zone is corresponded by key [**1**], Z12 – key [**2**], Z15 – key [**5**]. Extended indication mode is switched off after pressing ⏻ once again or after pressing [***CLEAR***].

9.1.2. [*TBL] KEY* – TROUBLE DISPLAY

If key [***TBL***] illuminates, it indicates system failure. Press [***TBL***] to check the failure type. [***TBL***] starts to flash and luminous keys [**0**]…[**9**] indicate failure type. Extended failure information is made available upon pressing of a luminous button..

Alight key	Failure
[**2**]	Power supply failure **[1]**: unconnected backup battery or low backup battery voltage. **[2]**: 230V power supply voltage is absent .
[**4**]	Communication malfunction. **[2]**: malfunction of communication with the monitoring station. **[9]**: GSM communication malfunction .
[**5**]	Zone fault (open tamper contact or short-circuit). **[1]** ... **[32]**: faulty zone number .
[**7**]	Fire protection zone fault. **[1]**...**[32]**: faulty zone number .
[**8**]	System clock time lost. *

To deactivate trouble display mode, press [**TBL**] key one more time or press [***CLEAR***] key.

* * System's clock should be set only system timer function is used. System clock deregulates in case main power supply and backup battery are disconnected. System clock setting with SMS message directions described in Chapter 5.3.4. System clock setting with keypad described in Chapter 5.7.22.

9.1.3. [*MEM*] *KEY* – ALARM MEMORY DISPLAY

If an alarm has occurred on a zone, the respective zone LED will flash, the [**MEM**] key will light up, and the zones will be stored in memory. Memory indication mode is activated by pressing [***MEM]*** key ([***MEM]*** starts to flash). Alight keys indicate which zone had been triggered.
Memory is erased automatically when armed mode is activated or by pressing [***CLEAR]*** key when memory indication mode is active.
If K32LCD KEYPAD is used, after pressing [**MEM**] and further [**BYP**], it can be seen what were the last alarm events. It is shown in the LCD display when and what zone was activated. 512 last events are stored in the memory of system.

9.1.4. [*BYP*] *KEY – BYPASS PROGRAMMING*

A bypassed zone will not cause an alarm. If a zone is bypassed the system may be armed (**Ready** light will be on) even if the zone is open. Use zone bypassing when access is needed to part of the protected area. Also, damaged wiring or contacts on a zone may be temporarily bypassed until repairs can be made so that the system can be armed. To bypass zones, press [***BYP]*** key and enter 4 or 6 digit user access code. [***BYP]*** key starts to flash. Zone can be bypassed by pressing key, indicating certain zone number. Constantly alight key indicates of certain zone as bypassed. To activate zone, press key, indicating certain zone number one more time. Press [***CLEAR]*** key to turn off BYPASS programming mode. System memorizes bypassed zones. Constantly alight key [**BYP**] indicates, there are some bypassed zones in system memory. BYPASS memory is erased automatically after disarming the system. If bypassed zone is operating in 24-hour mode, BYPASS mode is not turned off automatically. In this case BYPASS mode can be switched off only by keypad or in a remote way, while calling and entering corresponding code or by sending SMS message.

9.1.5. [*CLEAR*] KEY

Use the [***CLEAR***] key to clear mistakes when entering user code (etc.) or to return to main keypad mode.

9.1.6. [*ENTER*] *KEY*

Use the [***ENTER***] key to activate system parameter programming mode.

9.1.7. "~" AC MAINS INDICATOR

This indicator is not alight when there is no 230 VAC power supply voltage and system is powered by backup battery only.

9.1.8. "StayD" (STATUS) INDICATOR

Indicator is on when all zones are closed and system is ready to be armed.

9.1.9. "OFF" INDICATOR

Indicator is on if the system is disarmed.

9.1.10. "ARM", "SLEEP" and "STAY" INDICATORS

Indicator **ARM** is alight constantly, if the system is in regular arm mode, indicators **SLEEP** or **STAY** are alight constantly, if the system is in partial arm mode. In case of alarm, these indicators flash fast.

9.2. REGULAR ARMING

This method will arm all the zones in the selected partition. Check to see if the **TBL** or **BYP** light is on before arming the system. Regular arming is possible only if all alarm zones are closed (not triggered). Constantly alight keypad keys indicate open zones (key [**1**] – zone Z1, key [**10**] – zone Z10).

Regular arming:

- Close all protected doors and windows and stop movement in areas covered by motion detectors. Check to see that the **StayD** (**Ready**) light is on (all zones are closed). The system cannot be armed till the **StayD** light is off.
- Press the [**ARM**] key.
- Enter a 4-digit or 6-digit user access code.

As each digit is entered the keypad buzzer will beep. If the security code was entered incorrectly, the sounder will beep steadily for 2 seconds. If the code was entered correctly but the "Ready" light was not on, the keypad will beep steadily for 2 seconds. When the correct code is entered, the ARM light will flash and the keypad buzzer will beep quickly. Exit the premises through the designated exit-entry door. Exit delay time is indicated by short keypad beeps, repeating each second. At the end of the allowed exit time the keypad buzzer will beep quickly and the **ARM** light stays on constantly. User receives confirmation short call or SMS message (depends on system configuration, see Ch. 5.3.2.2).

If system is divided into two partitions, only one partition or both partitions at once can be armed when using particular access code. Functionality of the access codes is described in Chapter 5.7.2.

Regular arming can also be activated using 24-hour timer or **One-Touch arming**. One touch arming allows you to arm the system without using access codes. Press and hold the [**ARM**] key for 3 seconds to arm the system.

9.3. STAY & SLEEP ARMING

In partial arming mode, only some partitions are secured (e.g., someone is present on the room and only doors and windows require protection, ignoring the movement sensors). The partial arming mode is enabled by clicking [**SLEEP**] and [**STAY**] buttons and entering the user code. The partial arming mode can also be enabled by pressing a single button. The arming mode is enabled by pressing and holding [**SLEEP**] or [**STAY**] button for three seconds; in this case, the confirmation call is made or SMS message is send to the user ALRNR1. The partial arming mode is indicated by constantly illuminated button [**SLEEP**] or [**STAY**]. The partial arming mode does not apply to partitions operating in 24h mode.
If the system is divided into two partitions, the corresponding code enables only one partition or both of them at once. Setup of control codes is described in Ch. 5.7.2.

9.4. DISARMING & DEACTIVATING AN ALARM

The alarm system is disarmed by entering 4 or 6 digit user code. The code must be entered within a certain time (programmed by the installer) after entering the room. If the code is not entered within the preset time, the system enters the alarm mode– activates the siren, makes calls and sends SMS messages.

9.5. PANIC ALARMS

In case of an emergency, the system can provide three panic alarms that can immediately generate an alarm after simultaneously pressing and holding two specific keys for three seconds.

Pressed keys	Panic alarm type
[**1**] + [**3**]	Panic alarm. Siren is on, message to alarm monitoring station is sent. SMS is not sent.
[**4**] + [**6**]	Silent alarm. Message to alarm monitoring station is sent. SMS is sent to the users.
[**7**] + [**9**]	Fire alarm. Siren is operating with interruptions, message to alarm monitoring station is sent. SMS is sent to the users.

9.6. CONTROL OF SEPARATE PARTITIONS

If the system is divided into two partitions, partition control depends on user code assignment (see Ch. 5.6.2). If the user code is assigned to a single partition, the partition is activated or deactivated by entering the code. If the user code is assigned to both partitions, the partition number must be entered within 5 seconds (by pressing [1] or [2]). If no partition number is entered within 5 seconds, both partitions are activated or deactivated together.

9.7. PROGRAMMABLE OUTPUT CONTROL

The programmable output (PGM) on the GsmAlarm-600 can be made to activate by a command from the keypad. This output can be used for operating other devices such as; garage door opener, special lighting or door strikes.

In order to activate programmable output, press the [***ARM***] key and enter an output control code. If you want to deactivate the output, press the [***OFF***] key and enter an output control code. Programming of output control codes is described in chapters 5.7.1. and 5.7.2.

To enable output by a shortcut command press two buttons at once (e.g. 1 and 2) and hold until keypad sounds. To disable press another two buttons (e.g. 2 and 3). The outputs must operate in modes M31, M32, M33 or M34 (see Ch. 5.3.2.1). On TM50 keypad, the outputs are controlled via menu item “PGM logical keys” (Menu -> PGM).

10. SYSTEM CONTROL USING iBUTTON ACCESS KEYS

Touch shortly an iButton key to the contacts of the reader to arm or disarm the alarm system and/or activate programmable output. The key is read in 1-2 seconds. Completion of the key code capture is confirmed by a rapid blinking of the light indicator. A key can be programmed for control of a single partition (if the system is divided into 2 partitions) or for control of the entire system. Maximal number of keys: 20.

11. REMOTE ARMING & DISARMING

The system can be armed or disarmed remotely through a call, phone keypad (DTMF tones) or SMS message.
In order to arm or disarm the system through a call:

- Call GsmAlarm-600 number.
- Wait until system answers.
- Enter 2-digit code using your phone keypad.
- Press the [*] key to activate the code.

You can use the following codes to arm or disarm your system:

01* - arms the whole system
00* - disarms the whole system

83* - arms the first partition
82* - arms the first partition, STAY mode
81* - arms the first partition, SLEEP mode
80* - disarms the first partition

93* - arms the second partition
92* - arms the second partition, STAY mode
91*- arms the second partition, SLEEP mode
90* - disarms the second partition

When the code is entered, call is automatically ended. Depending on system settings user receives confirmation call or (and) SMS message. For example:

SYSTEM ARMED. STAY MODE. (USER1)

If system is divided into two partitions, names of protected objects (partitions) can be seen in the SMS message:

OBJECT 1: SYSTEM ARMED. SLEEP MODE. (USER1) OBJECT 2: SYSTEM DISARMED. (USER2)

System can be configured to arm and disarm by short, free call (see Chapter 5.3.3.2). In order to arm the system, user calls GsmAlarm-600 number and, hearing the first signal, cancels the call. In this case there is no exit delay, the alarm system is activated immediately. After the armed mode is on, user receives a short confirmation call or SMS. Don't cancel the confirmation call because it is cancelled automatically.

You can disarm the system by calling GsmAlarm-600 number and waiting for the system cancels the call (3-4 call signals).

The alarm system also can be armed or disarmed by SMS message. In the beginning of the message 8-digit password is entered and further command is written. For example:

A	A	A	A	A	A	A	A		0	1	*

or

0	1	*

(if SMS password is deactivated).

12. SYSTEM OPERATION IN ALARM STATE

In the case of trespass of the protected area GsmAlarm-600, depending on the programmed system operation algorithm, switches the siren on, calls and sends SMS messages to five users (ALRNR1-ALRNR5). If system programmed to call and to send SMS messages, at the end of the call cycle (no user picks up the prone) SMS message, with name of triggered zone, will be sent to all users. If whichever user picks up and enters 2-digit code using his phone keypad (codes are described in Chapter 14), SMS messages will not be sent to other users. Example of the message, user receives, given bellow:

```
Entry Door: ALARM(1)
Motion: OK(5)
```

SMS message shows that entry door sensor is in alarm state (opened) and was triggered 1 time (number in the brackets). Motion detector is not in alarm state but was triggered 5 times. Trigger counters are set to zero values each time when the system is armed or disarmed.
While answering user hears what is happening in the premises and also can control system by entering 2-digit codes using his phone keypad. For example, after entering code 99*, the system cancels the call and user receives message informing about state of the all zones:

```
SYSTEM ARMED. STAY MODE.
Entry Door: ALARM(1)
Motion: OK(5)
Windows: ALARM(1)
Fire: OK(0)
```

In the case of temperature zone activation, user receives SMS message informing about temperature:

```
Temperature: T=19C
```

13. POWER SUPPLY MONITORING

In case of main power supply failure after the programmed delay time user ALRNR1 or users ALRNR1...ALRNR5 receives following SMS message:

```
AC Mains  fault, Battery voltage: 12.5V, Signal strength: 100%
```

In case of recovery of power supply after one minute user receives following SMS message:

```
AC Mains OK, Battery voltage: 13.7V, Signal strength: 100%
```

If data transfer to monitoring station option is on, messages at first are sent to alarm monitoring station and then to user ALRNR1 – ALRNR5.

The system also will report about the fault of backup battery or the backup battery is running out of power:

```
Battery is running out of power! System will shut down in 1 minute.
```

14. GSM JAMMING DETECTION

The system has capability to detect intentional jamming of GSM. If the detection function is on (see Ch. 5.3.2 or 5.7.17), the siren is activated upon detection of the jamming signal, and the user is informed thereof by an SMS message about it after clearing of GSM jamming signal. Siren operates with interruptions. The message indicates the jamming onset time.

GSM Jamming detected! Time: 08:55

15. SYSTEM CONTROL USING DTMF AND SMS COMMANDS

In the speech mode user can control the system, after having entered relevant code from his phone keypad. 2-digit command is entered by pressing the key [*]. If the instruction is completed, user hears three tone confirmation signals.
Speech mode can be activated in two ways: user answers when GsmAlarm-600 calls, or user calls and waits for GsmAlarm-600 to answer (3-4 call signals).

The control commands also may be transferred by SMS. Insert password in the beginning, then type the command. E.g.: in order to switch on output *C1,* to switch off output *C2*, to switch on *BELL* and to receive a SMS with information on the status of the PGM outputs, send the following SMS:

A	A	A	A	A	A	A	A		1	1	*		2	0	*		7	7	*

or

1	1	*		2	0	*		7	7	*

(if SMS password is deactivated).

DTMF or SMS code	Code Function
*00**	Disarms the whole system.
*01**	Arms the whole system.
*11**	Activates output *C1.*
*10**	Deactivates output *C1*.
*22**	Activates output *C2*.
*20**	Deactivates output *C2.*
*33**	Activates output *C3.*
*30**	Deactivates output *C3.*
*44**	Activates output *C4.*
*40**	Deactivates output *C4*.
*55**	Activates output *C5.*
*50**	Deactivates output *C5.*
*66**	Activates output *C6.*
*60**	Deactivates output *C6.*
*17**	Activates output *C7.*
*07**	Deactivates output *C7.*
*18**	Activates output *C8 (BELL).*
*08**	Deactivates output *C8 (BELL).*
*77**	Requests to send SMS about state of the system outputs
*80**	Disarms the first partition.
*81**	Arms the first partition, STAY mode.
*82**	Arms the first partition, SLEEP mode.
*83**	Arms the first partition.
*88**	Requests to send SMS with information about GSM signal strength, power supply voltage, module temperature and GPRS mode (if GPRS interface is enabled).
*90**	Disarms the second partition.
*91**	Arms the second partition, STAY mode.
*92**	Arms the second partition, SLEEP mode.
*93**	Arms the second partition.
*97**	Requests to send SMS with open zones only.
*98**	Requests to send SMS with temperature values only.
*99**	Requests to send SMS about state of the system and protected zones.

*19**	Microphone on (voice messaging disabled)
*09**	Microphone off (voice messaging enabled)
01# - 64#	Temporary disconnects of the zone (turning on BYPASS mode).
00#	Turns off BYPASS mode of the all zones.
71#	Activates iButton key programming mode.
70#	Deactivates iButton key programming mode.
75#	SMS password reset to the factory default.
79#	Request to send an SMS message that includes the password.
##**	Activation of voice messaging recording mode (if a SD card is present).

It is possible temporarily to turn off chosen zone by commands *01# - 64#* (for example, in the case of sensor fault, if system is constantly sending wrong alarm messages). In order to turn off zone Z1, code *01#* is entered. In order to turn off zone Z12, code *12#* is entered. Command *00#* turns off BYPASS mode for the all zones.

SMS commands for system programming and diagnostics are listed below.

SMS instruction	Function
ZPARAM1	Request to send an SMS message with input Z1-Z32 parameters.
ZPARAM2	Request to send an SMS message with input Z33-Z64 parameters.
CPARAM	Request to send an SMS message with output C1... C7 and BELL parameters.
SPARAM	Request to send an SMS message with general system parameters.
RPARAM	Request to send an SMS message with names of the protected objects (partition names).
UPARAM	Request to send an SMS message with user names.
NRINFO	Request to send an SMS message with user numbers ALRNR1 – ALRNR5.
PASSW:	SMS password change instruction.
ALRNR1: *ALRNR2:* *ALRNR3:* *ALRNR4:* *ALRNR5:*	User numbers programming instructions
ADDNR:	Additional user numbers programming instruction (for gate or fence control).
ADDNR-C1:	Additional user number programming instruction. Only the output C1 is controlled by this number (for gate or fence control).
ADDNR-C2:	Additional user number programming instruction. Only the output C2 is controlled by this number (for gate or fence control).
ADDNR-C3:	Additional user number programming instruction. Only the output C3 is controlled by this number (for gate or fence control).
ADDNR-C4:	Additional user number programming instruction. Only the output C4 is controlled by this number (for gate or fence control).
ADDNR-C5:	Additional user number programming instruction. Only the output C5 is controlled by this number (for gate or fence control).
ADDNR-C6:	Additional user number programming instruction. Only the output C6 is controlled by this number (for gate or fence control).
ADDNR-C7:	Additional user number programming instruction. Only the output C7 is controlled by this number (for gate or fence control).

ADDNR-C8:	Additional user number programming instruction. Only the output C8 (BELL) is controlled by this number (for gate or fence control).
DELNR:	Additional user numbers erasing instructions.
NRLIST	Request to send SMS message (messages) with all numbers stored in SIM card.
SCLOCK	System clock control and time setting instruction.
TSINCH	Automatic time synchronization instruction.
STIMER	Request to send SMS message with system timer parameters.
CIDACC	CONTACT ID user account number programming instruction.
ZOPTXT:	Programming of the word informing that zone is in alarm state (open). Default: ALARM (see Ch. 5.4).
ZCLTXT:	Programming of the word informing that zone isn't in alarm state (closed). Default: OK (see Ch. 5.4).
GETIPA	Activation of GPRS connection (server mode), request to send SMS with GSM module IP address and connection port number.
CONNECT	Activation of GPRS connection (client mode), request to send SMS with computer IP address and connection port number.
APN:	GPRS access point name programming.
APLOG:	Programming of GPRS access point login name.
APPASS:	Programming of GPRS access point login password.
PORT:	GPRS access port number programming.
VERSION	Requests to send SMS with software version.

16. WARRANTY

MANUFACTURER AND DISTRIBUTOR is not responsible for possible theft from GsmAlarm-600 protected premises. GSM service operators are not associated to company "UAB Elektronines technologijos", therefore, company takes no responsibility for GSM network services, coverage and functioning.

GsmAlarm-600 system provided with 24 month warranty. Warranty period starts with purchase date. If there are no purchasing documents, period counted starting from system manufacturing date (dated on security system identification label). Warranty is not valid if system: is reconstructed; wrongly assembled; used not on purpose; mechanical, chemical, electric damage and in other cases that are not related with GsmAlarm-600 manufacturing defects are seen.

If security system is not operating properly or breaks down, for guarantee or post-guarantee service, please contact company that performed assembling and installation of the system. Practice shows that main system operating failure reason is incorrectly performed system assembling.

CE

Company "Elektronines technologijos" declares, that product "GsmAlarm-600" satisfies all essential requirements of standard EN 60950–1:2003 following European Union directive 2006/95EC.
The declaration of conformity may be consulted at www.eltech.lt

Ademco Contact ID is a registered trademark of Pittway Corporation.
PARADOX is a registered trademark of Paradox Security Systems Ltd.
iButton is a registered trademark of Maxim Integrated Products, Inc.
Dallas is a registered trademark of Maxim Integrated Products, Inc

17. TECHNICAL CHARACTERISTICS

GSM MODULE	
Operating frequency	**GSM 900 / 1800 MHz**
MAIN POWER SUPPLY (connected to terminal "AC ")	
Power supply voltage	**AC 16-24V**
Frequency AC	**50/60Hz**
Maximum current	**~2A max**
BACKUP BATTERY (connected to terminals "BAT ")	
Backup battery operating voltage	**DC 12V**
Backup battery type	**PB - acid**
Backup battery capacity	**7 Ah max**
OUTPUTS "AUX1" and "AUX2" (FOR EXTERNAL DEVICES)	
Output voltage	**DC 12V**
Maximum current	**⎓ 800 mA max**
Short circuit protection triggering current	**⎓ 2 A max**
SIREN OUTPUT "*BELL*" (C8)	
Output type	**Semiconductor**
Maximum current	**0.6 A max**
Output active	**Connected to GND**
Output non-active	**Open contact**
PROGRAMMABLE OUTPUTS *C1, C2, C3, C4, C5, C6, C7*	
Output type	**Semiconductor**
Maximum current	**70 mA max**
Output active	**Connected to GND**
Output non-active	**Open contact**
INPUTS *Z1 – Z16*	
Load resistor (in EOL or ATZ mode)	**1,0 kΩ, ±5 %** **2,2 kΩ, ±5 %**
Temperature measurement range	**-40°C…+110°C ±1°C**
POWER CONSUMPTION (without external sensors and keypad)	
Non-activated state	**75 mA max**
Call, sending SMS or speech mode	**350 mA max**
OPERATING TEMPERATURE	**-30°C…+65°C**
DIMENSIONS	**150 x 95 x 30 mm**

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